

CHRONOLOGY:

Or, the ART of

Emerson (M.) K

RECKONING TIME.

DESCRIBING

The several Divisions of TIME in common Use;
the Nature and Original of CYCLES and PE-
RIODS, and the most remarkable AERA's; and
the manner of Computing the Numbers of such
CYCLES, or the Common Notes, for any Year;
the moveable Feasts; the Places of the Sun and
Moon; and the Nature of the Calendar.

Founded upon

ASTRONOMICAL PRINCIPLES.

To which is added,

A Short CHRONOLOGICAL TABLE.

*— res antiquæ laudis et artis
ingredior, ———— VIRG.*

L O N D O N:

Printed for J. NOURSE, in the Strand;
Bookseller in Ordinary to his MAJESTY.

MDCCCLXX.

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CHRONOLOGY:

OF THE ART OF

RECKONING TIME.

THE

DESCENDING

THE REVEREND FATHER A. C. E.

OF THE ORDER OF CYCLES AND P.

I have the honor to acknowledge the receipt of your letter of the 10th inst. and in reply to inform you that the same has been forwarded to the proper authorities for their consideration. I am, Sir, very respectfully,
Your obedient servant,
A. C. E.

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T H E
P R E F A C E.

I Suppose little or nothing need be said in praise of an art, which we stand in need of, and are forced to practice every day; and such is the art of Chronology. Without this art we could not tell how time goes on, nor understand the difference of times and seasons. We daily want to know the rising and setting of the sun and moon, the increase or decrease and the length of days, the moon's changing and full, and such like things.

There is such a near connection between Astronomy and Chronology, that some authors treat of them together; and in this Treatise I have laid down such astronomical problems as are always wanted in Chronology; which are here solved or rather reckoned, after a short way for common use. But to have them accurate, must be performed more laboriously by Astronomy.

As Chronology is of such service in reckoning time, and every body has some business or other with time; therefore every body should at least know the use of the Calendar, and the common Chronological notes; and be acquainted with so much Chronology, as to be able to point out the several times and seasons, as they are distinguished in the country where he lives. Therefore I have here put together the easiest elements of

Chronology, or those of most frequent use, being such as relate to the civil computations of time.

Chronology is absolutely necessary to be known by all such as want to understand history; without which he will wander in the dark, and be always at a loss. For as the History tells us the person that acts, and Geography gives us the place of action, so Chronology must give us the time of acting; without which we shall have very imperfect notions of what we read. For this reason, I have added a Chronological table, containing the most memorable actions that have happened, and the most remarkable events; and the times when the most famous men were alive.

It is true, the Chronology of ancient times is very obscure and uncertain; for though the facts are mostly true, yet these being annexed to wrong periods of time, has occasioned infinite perplexities and inconsistencies in Chronology, which stood in great need of amendment. For this reason Sir I. Newton set about rectifying the times, which he did with wonderful sagacity; and has given us a table of ancient transactions, adjusted to their proper periods of time, as far as he had any data to work by, and perhaps as far as it is possible to be done in this age. By this means he has made a great many events in history, surprisingly to agree. This he effected by reasoning from the lengths of generations of men, and of the reigns of kings, and by astronomical observations, where they could be had; and these are infallible guides.

For to confirm the time of any transaction, several characters, taken from Astronomy, are of especial use; as the eclipses of the sun and moon, the conjunctions of the superior planets, the acronical rising or setting of the stars, the occultation of the fixed stars by the moon, the places of the equinoctial points, and such like. These, when taken notice of by any historian, go a great way in determining the time of any action or event, then mentioned.

But

The P R E E A C E.

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But some perverse people, bigotted to another way, and resolved to oppose all improvements; not content with what Sir I. Newton had done, have ventured to write against him; tho' they cannot tell how to give a better system, or clear the common system of Chronology from its known inconsistencies. In what they advance, they only give us the chaff and the corn together; some truths mixt with endless falsehoods, absurdity and nonsense; knowing no way to separate them, and wanting Sir Isaac's philosophical sieve; so they blunder on in the old road, and stick fast among their absurdities, not knowing how to extricate themselves. Some of them attempt to confute Sir Isaac's astronomical computations, which perhaps may go down with such as are no judges; but will be laughed at by such as are; for when things are examined, they appear to be most wretched computers. The way to confute him is to invalidate his proofs, which they can never do. Therefore the table I have annexed is mostly taken from his table, as being evidently the most consistent scheme that has yet appeared.

W. Emerson.

CHRONOLOGY

By JOHN DECAEN, Esq. of the Middle Temple, Barrister at Law.
LONDON: Printed by J. DODD, at the Crown and Anchor, in St. Dunstons Church-yard, 1734.

CHRONOLOGY, or the History of Time, is the History of the Succession of Events, and the Duration of Things. It is divided into Natural, Political, and Ecclesiastical Chronology. Natural Chronology is the History of the Succession of Events, and the Duration of Things, as they are connected by the Course of Nature. Political Chronology is the History of the Succession of Events, and the Duration of Things, as they are connected by the Course of Human Affairs. Ecclesiastical Chronology is the History of the Succession of Events, and the Duration of Things, as they are connected by the Course of Divine Providence.

DEF. III.

The **Year** is the Time which the Earth takes to revolve round the Sun, from any one Position to the same Position again. It is divided into Solar, Lunar, and Sidereal Years. The **Month** is the Time which the Moon takes to revolve round the Earth, from any one Position to the same Position again. It is divided into Solar, Lunar, and Sidereal Months. The **Day** is the Time which the Earth takes to revolve round its Axis, from any one Position to the same Position again. It is divided into Solar, Lunar, and Sidereal Days.

DEF. IV.

The **Century** is the Time which the Earth takes to revolve round the Sun, from any one Position to the same Position again, after the Interval of 100 Years. The **Millennium** is the Time which the Earth takes to revolve round the Sun, from any one Position to the same Position again, after the Interval of 1000 Years.

DEF. V.

The **Epoch** is the Time which the Earth takes to revolve round the Sun, from any one Position to the same Position again, after the Interval of 1000 Years. The **Epoch** is the Time which the Earth takes to revolve round the Sun, from any one Position to the same Position again, after the Interval of 1000 Years.

CHRONOLOGY.

DEFINITIONS.

DEF. I.

CHRONOLOGY is the art of measuring time, and adjusting all actions and events, to the several points of time in which they happened. And these parts of time are years, months, weeks, days, hours, minutes, seconds, &c.

DEF. II.

A *Year* is the time wherein the sun (apparently) moves round the earth in its orbit, or the earth (really) moves round the sun. This is the most obvious and sensible measure of large portions of time.

DEF. III.

The *astronomical* or *periodical Year*, is the time wherein the earth moves round the sun, from any star or fixt point in its orbit, to the same point again, and consists of 365 days, 6 hours, 9 minutes, 14 seconds.

DEF. IV.

The *tropical Year* is the time wherein the earth (or sun) performs its revolution thro' all the seasons; which being ended, they all return again as before. It consists of 365 days, 5 hours, 48 min. 57 sec.

DEF. V.

The *Egyptian Year* is the ancient year used by the *Egyptians*, and now used by the *Persians*, and

is just 365 days continually. This being shorter than the tropical year by near 6 hours, a day is lost in 4 years; and in about 1500 years, the beginning of the year moves backward thro' all the seasons. This year is the most convenient for astronomical calculations, as it is always the same, having no intercalary days to interrupt it.

D E F. VI.

The *Julian Year* is the year instituted by *Julius Cæsar*, 46 years before Christ. It contains 365 days for three years, which are called *Common Years*; and 366 days, every fourth year, which is called *Leap Year*; whence the Julian Year is 365 $\frac{1}{4}$ days at a mean. But this year being longer than the tropical year by full 11 minutes, a day is gained in 130 years; or the seasons come sooner by a day in 130 years. And in 47540 years the beginning of the year would move forward, thro' all the seasons of the year.

D E F. VII.

The *Gregorian Year*, is the year instituted by *Pope Gregory*, in 1582; it consists of 365 days for three years, and 366 for the fourth, which is leap year, like the Julian. But then every hundredth year, that is, not divisible by 4, must be only a common year, instead of a leap year.

This sort of year is nearest the tropical year of any, and agrees nearly with the apparent motion of the sun, and is designed to keep pace with the tropical year. But it is very unfit for astronomical calculations, being perplexed with so many intercalations.

It was contrived to be brought to the sun's motion as it was at the time of the council of Nice, in 325; which was done by dropping 10 days out of the Calendar in the month of October. In the last

last century it was 10 days before the Julian account; and in the present century, is 11 days before the Julian year; and gains one day more, every following century, except in such as are exactly divisible by 4. But it is strange that the Pope should bring back the beginning of the year, only to the Nicene council; when it ought to have been brought back to the time of Julius Cæsar, when the error was first begun; at which time the vernal equinox was on March 24 or 25. And then instead of 10 days, 13 or 14 should have been cut off.

This year was brought into use in England in the year 1752; before which, the Julian account was always used. It was effected by striking out 11 days in September, calling the third day the fourteenth, and so on. And the year to begin on Jan. 1.

D E F. VIII.

The *civil Year* is the year which is in common use in any nation. Thus the Julian year was used in England till 1752, and after that the Gregorian year was to be always used.

Different nations begin the year at different times. The ancient *Egyptians* fixt its beginning in August; the *Athenians* and *Grecians*, at the summer solstice; some places in *Germany* and *Italy*, at the vernal equinox; and others at the autumnal equinox. But most of the *Europeans* begin it at the first of January; as England does by a late act of parliament.

The year is divided into 12 months; as also into four quarters, for the four seasons of the year; spring, summer, autumn, and winter.

D E F. IX.

The *lunar Year* consists of 12 lunations, or 354 days; it is used by the *Turks* and *Mahometans*. It runs thro' all the seasons in 32 years.

D E F.

D E F. X.

The *lunisolar Year*, is the most ancient year of all; it consisted of 12 lunations or months of 30 days each; which fell short of the solar year, and therefore they were obliged to add a month, whenever they found it too short for the return of the seasons; and to omit a day or two in an intercalary month, when they found it too long for the course of the moon.

D E F. XI.

A *Year current* is a year running on, and not yet compleated. The same of days, &c.

D E F. XII.

A *Month* is the 12th part of the year.

D E F. XIII.

A *solar Month* is the time of the sun's passing thro' a sign of the zodiac.

D E F. XIV.

A *lunar* or *synodical Month*, is the time between one conjunction of the sun and moon to another. It consists of 29 days, 12 hours, 44 min. at a mean lunation.

D E F. XV.

Periodical Month, is the time of the moon's revolution, till it came again to the same point, or the same star. It is 27 days, 7 hours, 43 min.

D E F. XVI.

Civil or *calendar Month*, is the length of 30 or 31 days, according as is set down in the Calendar.

D E F.

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DEF. XVII.

A month of weeks; this consists of four weeks; and 13 of these months make a year, wanting a day.

DEF. XVIII.

A week is a collection of seven days, the 1st day is sunday, 2 monday, 3 tuesday, 4 wednesday, 5 thursday, 6 friday, 7 saturday; then they come about again in the same order. These days have their names from the seven planets.

DEF. XIX.

A day is the time wherein the sun seems to make one revolution. This is the most sensible part of time for measuring the small parts of it.

DEF. XX.

A natural day, is the time wherein the sun moves round the earth, from one meridian to the same again. This is longer by about four minutes, than the time of the earth's rotation.

Different people begin the day differently. The *Astronomers* and *Arabians* begin the day at noon the preceding day, and end it at noon again. The *Jews*, *Italians*, *Athenians*, *Austrians* and *Bohemians*, begin their day at sun-set the preceding evening, and reckon till sun-set again. The *Babylonians* begin and end their day at sun-rise. The ancient *Egyptians*, and most *Europeans*, begin the day at midnight preceding, and reckon to the midnight following.

DEF. XXI.

An artificial or shining day, is the time the sun is above the horizon, or the time between sun-rise and sun-set. And *night* is the time of the sun's absence.

DEF.

D E F. XXII.

An *hour*, is the 24th part of a natural day. The *Italians* reckon to 24 hours; most others reckon to twice 12.

D E F. XXIII.

Planetary hour, is the 12th part of the time of the sun shining; as also the 12th part of the time of his absence.

The Jews and ancient Romans divided the day into 12 hours, whether long or short; and begun to reckon their hours at sun-rise, and ended at sun-set, when they began to reckon the hours of the night, which they also divided into 12 parts or hours. Whence the hours of their day were longer than the hours of their night in summer; and shorter in winter. The Turks use this way at present.

D E F. XXIV.

A *minute* is the 60th part of an hour; a *second* the 60th part of a minute; and so of *thirds*, *fourths*, &c.

D E F. XXV.

A *period* or *cycle*, is a certain space of time, or a revolution of a certain number of years, which being ended, it begins anew. Thus,

The *Julian period* consists of 7980 years; the product of the numbers, 19, 28, 15. This period was 4713 at the beginning of the Christian Era.

The *Dionysian* or *Victorian period* is 532 years, being the product of 19 and 28. This period was 457 at the beginning of the Christian Era. And,

D E F. XXVI.

An *Era* is a particular account or reckoning of time, from some remarkable point; to which account all events and memorable actions are referred.

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referred. This has a beginning but no ending, as a period has.

The following are the most remarkable Era's, according to the common account.

Years before Christ.

Of the world,	—	4000
Noah's flood,	—	2294
Of the Olympiads (Greek)		776
Building of Rome (Roman)		753
Nabonassar,	—	747
Of Christ's birth,	—	2

Years after Christ.

Dioclesian persecution,		284
Hegira, among the Turks,		622
Gesdegird, among the Persians,		632

D E F. XXVII.

Epocha is the first point of time, or the beginning of an Era.

D E F. XXVIII.

Stile, the method of reckoning time. The *Julian stile* is the *old stile*, in use from the time of Julius Cæsar. The *Gregorian stile*, is that begun by Pope Gregory, called the *new stile*; and used in England since 1752.

D E F. XXIX.

The *Calendar* is a day book for a year, divided into twelve parts for the twelve months, and each month into its proper number of days, all regularly numbered; which numbers are to shew the day of the month.

The names of the months from the beginning to the end of the year, and the days in each are, January 31, February 28, March 31, April 30, May

31,

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31, June 30, July 31, August 31, September 30, October 31, November 30, December 31: in leap year February hath 29. The number of days in each month may be remembered by these lines,

*30 days hath September,
April, June, and November,
February has 28 alone,
And all the rest have 31.*

Against the days of the month in the Calendar, are set all the remarkable days, holy days, festivals, term times, with such Phænomena of the sun and moon, as are useful for measuring and determining the several times and seasons of the year, but especially all the fixt days; for if the moveable days are inserted, it is more properly an *Almanack*, and lasts only for a year; whilst the Calendar is perpetual.

Every week is divided into seven days, which are denoted by the first seven letters of the alphabet, A, B, C, D, E, F, G; A is set at the first day of January, B at the second, C the third, &c. all following in order, and keep their places invariable. The letter that falls on a sunday is called the Dominical letter.

Since a common year has 365 days, or 52 weeks and one day; therefore A will stand against the last day of the year, as well as against the first. Therefore if any year begins on a sunday it will also end on a sunday; and therefore the next year will begin on a monday; and therefore the next year, to that, on a tuesday; and the next, on a wednesday; and so on till a leap year happens, when February has 29 days, and then that year goes forward, or leaps two days. And hence it follows, that the sunday letter for each succeeding year moves one letter back, in this order, A, G, F, E, &c. till leap year, and then it moves two letters back.

In

In the yearly Diarys or Almanacks, the Sunday letter is commonly marked a red letter, to denote it belongs to Sunday. For all nations set apart one day in the week for publick worship. The *Christians* observe the first day in the week, or Sunday, which they call the Lord's day. The *Grecians*, Monday; the *Persians*, Tuesday; the *Assyrians*, Wednesday; the *Egyptians*, Thursday; the *Turks*, Friday; the *Jews*, Saturday, which they call the Sabbath.

Besides the periods or cycles before mentioned, there have been several others in use among the ancients; as a *Jubilee* 49 years, used by the Jews. An *Olympiad* 4 years, used by the Greeks. A *Lustrum* 5 years, used by the Romans; and the *Roman Judicature* 15 years. An *Age* or *Century* 100 years.

SCHOLIUM.

I shall here make some remarks concerning the calendar and the division of the year; not only in their present form, but as formerly used.

Before the time of *Julius Cæsar*, the months consisted alternately of 29 and 30 days, by which means the new moon kept to the first day of every month, when once rightly adjusted; and their year always begun with the new moon nearest the vernal equinox. But afterwards, by the order of *Julius Cæsar*, the months were made to consist of 30 and 31 days alternately, and the last of 29; which made up the year, or 365 days. And the year begun at March. The months and days were as follows,

March 31	July 31	November 31
April 30	August 30	December 30
May 31	Septem. 31	January 31
June 30	October 30	February 29, and 30 in leap year.

But

But this regular and uniform method was altered by *Augustus Cæsar*, who made August 31, and February 28, and the rest as we have them now. But tho' the said uniform method of computing, was altered at the pleasure and humour of a Roman tyrant; yet it is strange that none restored it again after his death, upon account of its simplicity.

This Julian year with its months thus disposed, has several advantages; as 1. the year beginning at March; the intercalary day, in leap year, would come in at the end of the year, where it ought to be, and would disturb nothing. Thus in leap year, Feb. 30 would be the last day of the year. 2. From this distribution of the months into days, it will follow, that if the day of the moon's changing in March, is known for any year, it will be known in all the following months, according to her mean motion, by continually adding a day for every month past March; because each month taken one with another, is a day longer than the moon's synodic revolution. 3. The year beginning at March, it would be near the time when the sun is in the vernal equinox, which is the beginning of all astronomical computations.

It is certain, the more simple any account of time is, the more easy and regular will any computation be, that depends upon it. But the year now in use is quite otherwise. For the beginning of the year is fixt to the first of January; and the intercalary or additional day, which comes in every fourth or leap year, is added at the end of February; which in effect makes two beginnings of the year. For at the beginning of January, there is a change of the dominical letter, and of every other thing depending on it. And on the first of March there is another change of the dominical letter, and of all other things relating thereto.

thereto. So that one fragment of the year is regulated by one rule; and another, by another rule; which is a manifest absurdity. For it must needs appear absurd to any body, to see an additional day thrust into the middle of a year, where there is no room for it. But this is not all, for in the times following *Julius Caesar*, this intercalary day was absurdly thrust into the middle of a month; and the 24th of February was to be reckoned twice over; as if it were possible for one day to be two, or two days to be only one day.

It may be said for excuse, that most of Europe follows that way of reckoning, and therefore we in England, for the conveniency of corresponding with them, ought to follow the same. However, all nations that observe this sort of year, must labour under the like absurdities.

When Pope Gregory altered the civil year, and imposed it upon all Christendom to observe; he should have rectified it to the time of Christ's birth, and not to the time of the council of *Nice*. For our epocha is not dated from the Nicene council, but from the birth of Christ. And at that time the vernal equinox was not on the 21st of March, but on the 24th or 25th.

When the Protestant states of *Germany* came to a resolution to alter the Calendar, they would not receive the Pope's mandate, but did it in their own way, after this manner. They ordered that eleven days should be left out of February after the 18th day, in the year 1700. So that instead of writing Feb. 19, they should write March 1. And that the time of Easter for the future should be determined by astronomical calculation; which was to be the first Sunday after the first full moon after the vernal equinox. Or the Sunday after, when the full moon fell on a Sunday.

As to our Calendar, as now ordered by the Stile act, it keeps the same form, yet it differs in this particular, that the golden numbers are set to the full moons in each month, and not to the change, as formerly; which variation seems to have no manner of advantage in it, but a manifest disadvantage. For it is more material to know the moon's change, than the full, in every month except March.

To enquire particularly what sort of a year, or what kind of computation, had been the most convenient; we shall mention several ways that it may, or rather might have been ordered. And,

1. As the year consists of 365 days, 5 hours, 49 minutes very near. It might have been ordered to consist of 365 days for three years, and 366 every fourth year, as the Julian year does. And placing the odd day at the end of December; beginning the year with January. Or,

2. The Julian account might be preserved, and the odd day put at the end of February; and the year to begin at March. Then altering the dominical letters in January and February, so as to be continued from December in alphabetical order.

3. The year might always have begun on the same day of the week, as suppose on sunday, which would have much facilitated any computation by the day of the month. But it would have happened that we should always have, at the end of the year, two saturdays, and sometimes three. But I know of no inconvenience this could have been; and it would have had that advantage, that the first day of the week would also have been the first day of the year.

4. But this might at least have been done, viz. continuing the Julian year as it was, only beginning the year at March 1. For the Julian year is very near the solar year, and is very commodious for calculation, being a mean between the astrono-

mical

C H R O N O L O G Y.

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mical and tropical years. And is attended with no other inconvenience, but a small alteration of the seasons, the terms, fairs, &c. which might have been mended by putting them forward about a week in a thousand years, by an act of parliament. Whilst shifting the year to agree with these, is like shifting the fire to a man, to save him the labour of going to it. But be the convenience or inconvenience what it will, we must be forced to take up with what we have. However we know this, that we had but one account to follow before, and now we have two to follow.

P R O B. I.

To find how many years it is after leap year.

By the Gregorian account, which is the account we also follow; every hundredth year that is divisible by 4, is a leap year, and the others not. And moreover, every common year that is divisible by 4, is leap year, and the rest not. Whence,

R U L E.

Divide the year of our Lord by 4, and the remainder shews how long it is after leap year: if 0 remains it is leap year.

This holds for both Julian and Gregorian accounts. But in the Gregorian, no even hundreds are leap years, but such as can be divided by 4.

CHRONOLOGY.

*Example 2.**Let the year be 1769.*

4)1769(442

16

16

16

9
8

1 the first after leap year.

P R O B. II.

To find on what day of the week, a given day of the month falls on.

R U L E.

The initial letters of the words in the following two lines, are the dominical letters for the first day of each month in order; whence it is easy to reckon any day by the dominical letter.

*A dram did give Ben ease;
Good cheer, for all did freeze.*

Examp.

On May 16, 1769; the Sunday letter is A, and B (Ben) is May 1st, whence A is the 7th, therefore the 7, 14, 21, 28 are all Sundays; and therefore the 16th is Tuesday.

P R O B.

P R O B. III.

To find the cycle of the sun, or the number of it, for any year.

The cycle of the sun, or rather of the Sunday letter, is a period of 28 years; in which time it shews all the variations of the dominical letter. And this period being ended, all the numbers and correspondent letters, return again in the same order, for ever, by the Julian stile; but only till the century is out, by the Gregorian. Its principal use is to find the Sunday letter; but it is also an ingredient in the Julian period.

R U L E.

Add 9 to the year of Christ, and divide the sum by 28; the remainder is the number of the cycle. If 0 remains, take 28.

Examp.

Let the year be 1769.

$$\begin{array}{r} 9 \\ 28 \overline{) 1778} \end{array} \begin{array}{l} 63 \\ 168 \end{array}$$

98

84

rem. 14 the sun's cycle.

S C H O L.

The cycle of the sun continues always the same, and also the connection of the numbers, with the letters, according to the Julian form. But the connection of the numbers with the letters, by

B 3

the

CHRONOLOGY.

the Gregorian stile, is variable; any cycle lasting but 100 years, and then a new cycle is to take place.

P R O B. IV.

To find the dominical letter or letters, for any year.

I R U L E.

Add 17 to the year of the Lord, and divide the sum by 28; the remainder being found in the old cycle below, shews the dominical letter, for the *new stile*. If 0 remain, take 28. This rule holds only till 1800.

For the *old stile*, seek the number of the sun's cycle (found by the last Prop.) in the old cycle below, and against it is the dominical letter. This holds for ever.

Note, there are two letters in leap year; one holds till the end of February; the other to the year's end.

The old Cycle.

1 GF	5 BA	9 DC	13 FE	17 AG	21 CB	25 ED
2 E	6 G	10 B	14 D	18 F	22 A	26 C
3 D	7 F	11 A	15 C	19 E	23 G	27 B
4 C	8 E	12 G	16 B	20 D	24 F	28 A

To make this rule general for the new stile; instead of 17, between the beginning of 1800 and 1900, add 5, between 1900 and 2100, add 21; from 2100 to 2200, add 9, &c. And in general, add 16 more at every hundred years forward, except such as are divisible by 4. But after 7 additions of 16, the same numbers will return again; that is, after 8 hundred years.

Example

Example.

What is the dominical letter for 1769 ?

$$\begin{array}{r} 1769 \\ 17 \\ \hline 28)1786(63 \\ 168. \\ \hline \end{array}$$

106

84

22 = A in the old
cycle, for new stile.

But for old stile, 14
(the number of the cycle)
stands against D.

To shew the truth of this rule for all future ages. Here we keep to the old cycle and position of the letters, without alteration ; and find new additional numbers for every succeeding century ; because every century (except the 4th) is a common year, and therefore the Julian account is disturbed at these times, and requires an alteration.

In the Julian account the additional number is perpetually 9, because it was 9 at the beginning of the Christian era. And as the whole contrivance was arbitrary, the first year of the cycle was made a leap year, and set to the letter GF, the 2d is E ; the 3d D ; the 4th C, the 5th BA, being leap year again ; and so on till it come to 28, when it begins again. For if there was only a single change of the dominical letter every year, the cycle would be completed in 7 years. But since in every 4th year there is a change of two letters, therefore this cycle will consist of 4 times 7, or 28 years ; which being completed, all the letters return again in the same order.

Now to make a transition from the Julian to the Gregorian account. The stile was altered in

B 4 1752,

1752, a leap year; and the Julian letters ED, that is, D for the end of the year. Now by dropping 11 days, any week day is, by that means, moved 11 days forward in the alphabet; or rather (throwing out 7) 4 days forward. Therefore the Sunday letter, from D (in the Julian) becomes A (in the Gregorian); and being leap year, the letters will be BA. Now against DE in the cycle stands 25, and against BA is 5, which is 8 places beyond 25; but $9 + 8 = 17$; and as we added 9 to the year to find the Julian letter, we must now add 17 (which is 8 more), to find the Gregorian letter, by the old cycle. And this holds till the beginning of the next century, or between 1700 and 1800.

In the year 1800, the last rule would give 25 (ED) in the cycle, but since it is not to be a leap year, it will be only E. Therefore we must seek in the old cycle for FE, to the end that 4 years after, in the cycle, may be a double letter; and then all will go regularly forward till the next century. Accordingly against 13 we find EF. Then counting forward from DE to EF, we shall find EF to be 16 places beyond, and $17 + 16 = 33$, or rather (rejecting 28) 5. Therefore seeing before, we added 17 to the year; we must now add 5 to get the number and letter, between 1800 and 1900.

In the year 1900, by this last rule, we shall find 1 (GF) in the cycle; but not being leap year it must only be G; therefore seek AG, which is at 17, which is 16 before GF; therefore $5 + 16$ or 21 is the number to be added, which holds from 1899 to 2100; because 2000 being leap year, makes no alteration.

In the year 2100, we shall find 21 (CB), which must only be C; then find DC in the cycle, which is 16 further; and $21 \times 16 - 28 = 9$, the additional number for 2100 +, till 2200. Thus

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Thus adding 16 continually for every 100 years (except leap years), gives so many new rules. But after 800 years, we shall fall upon the same number of the cycle as at first; and the same numbers will return again; for $7 \times 16 = 4 \times 28$. Therefore the numbers to be added, in these several periods of time will be 17, 5, 21, 9, 25, 13, 1. Then 17, 5, &c. over again.

2 RULE.

Add 9 to the year of the Lord, and divide the sum by 28; the remainder being found in the I new cycle below, shews the dominical letter for the new stile, till 1800. Or find it in the II new cycle, shews it after till 1900. When 0 remains take 28.

For the old stile; thus,

Divide the year its 4th and 4, by 7;

What's left subtract from 7, the letter's given.

I new Cycle for 1700,
&c.

1 DC	15 G
2 B	16 F
3 A	17 ED
4 G	18 C
5 FE	19 B
6 D	20 A
7 C	21 GF
8 B	22 E
9 AG	23 D
10 F	24 C
11 E	25 BA
12 D	26 G
13 CB	27 F
14 A	28 E

II new Cycle for 1800,
&c.

1 ED	15 A
2 C	16 G
3 B	17 FE
4 A	18 D
5 GF	19 C
6 E	20 B
7 D	21 AG
8 C	22 F
9 BA	23 E
10 G	24 D
11 F	25 CB
12 E	26 A
13 DC	27 G
14 B	28 F

Examp.

*Examp.**To find the Sunday letter for 1769?*

$$\begin{array}{r}
 1769 \\
 \underline{9} \\
 28)1778(63 \\
 \underline{168} \\
 98 \\
 \underline{84}
 \end{array}$$

14 = A the sunday letter in the
I new Cycle.

It has been shewn before, that at the beginning of every century, 16 is to be continually added, for a new additional number. Or that the number, finding the dominical letter in the old cycle, is 16 places further on. But this is equivalent to making a new cycle, setting the letters, found at the 17th number, in the first place; the 18th in the second; and so on in order. And this must be done every 100 years; or a new cycle made for each century.

It was likewise shewn, that in changing the Julian for the Gregorian stile, that 8 was to be added to the Julian additional number, which is the same thing as reckoning 8 places forward from the first, and making that place, which is the 9th, the beginning of the I new cycle. Thus in the old cycle CD is the 9th place, and in the I new cycle it is the first; and all the rest follow in order. Again the 17th place of the I new cycle is DE, which therefore must begin the 2d new cycle. And if you would make a third, it must begin with EF; and a fourth with FG; and so on. Therefore in changing from the 1st to the
3d,

3d, 5th, 7th, &c. hundred year; as also from the 2d to the 4th, 6th, 8th, &c. you move 4 places forward in the last cycle. For $16 + 16 = 32$, which exceed 28 by 4. But here it must be remembered, that I except such hundreds as are leap years, because they make no alteration.

The first method shewed you to find the letter, by finding new additional numbers, retaining the same cycle; and the latter shows how to find it, by finding new cycles, retaining the same additional number. But the first method is easier, because a new number is easier found than a new cycle; but either way will do for the present age.

3 RULE.

Add to the year its 4th part; then divide by 7, and subtract the remainder from 7, gives the number of the letter, from 1700 to 1800.

After the beginning of the year 1800, 1900, 2100, &c. add the 4th part + 6, 5, 4, &c. respectively.

And in general for every 100 years (not leap years) abate 1. But after 7 such hundred years, the same numbers return again.

Note, there being two letters for leap year, this rule finds that, for the latter part of the year. And if the year has an exact 4th part, it is leap year.

Examp.

CHRONOLOGY.

*Examp.**Find the letter for 1769.*

$$\begin{array}{r}
 1769 \\
 442 \\
 \hline
 7)2211(315 \\
 \underline{21} \\
 11 \\
 \underline{7} \\
 41 \\
 \underline{35} \\
 6
 \end{array}$$

$$\begin{array}{r}
 7 \\
 \underline{6}
 \end{array}$$

6.

1 = A the letter.

In any century, by reason of the leap years, 5 letters go over in 4 years, reckoning from any fixt time. Let us reckon from 1700, when the letters were DC. Then in 1701, 2, 3, &c. the letters are B, A, G, &c. Therefore, if to any year (after 1700) its 4th part be added, the sum shews the number of letters elapsed, since that time. And that sum divided by 7, the remainder shews what letter it is, beginning at B, and reckoning backwards. The letters being numbered will stand thus,

B,	A,	G,	F,	E,	D,	C,	B,	A
1	2	3	4	5	6	7	8	9

To 1700 add its 4th part 425, then the sum 2125 divided by 7, there will 4 remain. If 0 had remained, we might have taken the year of our Lord instead of the year after 1700, without any more to do. But since by using the year of our Lord instead of the year after 1700, the remainder will be more by 4; therefore to accommodate this rule to the year of

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of our Lord, we must begin to number four places sooner, and then we shall fall upon the same letter either way. The numbering will be thus,

F,	E,	D,	C,	B,	A,	G,	F,	E,	D,	C,	&c.
1	2	3	4	5	6	7	8	9	10	11	
						0	1	2	3	4	

That is, the year of our Lord divided by 7, the remainder will denote the letter as above. But subtracting these remainders from 7, we shall find for A, 1; for B, 2; for 3, C; &c. in the order of the alphabet, as laid down in the rule.

In 1800 (not being leap year) and the following, the letter falls 1 short; therefore the remainder must be diminished by 1, or the year itself diminished by 1; for the same reason, 1900 and the following years, must be diminished by 2; 2100, &c. by 3, and so on. Or it comes to the same thing if 1800, &c. be increased by 6, 1900, &c. increased by 5, 2100, &c. increased by 4, and so on. For 6, 5, 4 are the compliments of 1, 2, 3, to 7.

Cor. 1. *The sun's cycle being known, the Gregorian letter is known, by adding 8, and finding the sum in the old cycle, gives the letter; till 1800.*

Cor. 2. *The old dominical letter being given, that for the new stile is had by adding 4 letters. This holds till 1800.*

A Table

CHRONOLOGY.

A Table shewing the Sunday letter till 1800.

years	lett.	years	lett.	years	lett.	years	lett.
1760	FE	1770	G	1780	BA	1790	C
61	D	71	F	81	G	91	B
62	C	72	ED	82	F	92	AG
63	B	73	C	83	E	93	F
64	AG	74	B	84	DC	94	E
65	F	75	A	85	B	95	D
66	E	76	GF	86	A	96	CB
67	D	77	E	87	G	97	A
68	CB	78	D	88	FE	98	G
69	A	79	C	89	D	99	F
						1800	E

P R O B. V.

To find the golden number for any year.

The *golden number or prime*, is a cycle of 19 years, increasing 1 every year, till it be completed; after which it begins again. This period of 19 years being ended, the new moons, and full moons, fall on the same day of the month, as they did 19 years before; and therefore it is called the *moon's cycle*. To find it,

R U L E.

Divide the year of our Lord by 19, and to the remainder add 1, gives the golden number, for both old and new stile.

Examp.

CHRONOLOGY.

31

Examp.

What is the golden number for 1769.

19)1769(93

171.

59

57

2

add 1

3 the golden number.

A Table of the golden Numbers till 1800.

years	G.N.	years	G.N.	years	G.N.	years	G.N.
1760	13	1770	4	1780	14	1790	5
61	14	71	5	81	15	91	6
62	15	72	6	82	16	92	7
63	16	73	7	83	17	93	8
64	17	74	8	84	18	94	9
65	18	75	9	85	19	95	10
66	19	76	10	86	1	96	11
67	1	77	11	87	2	97	12
68	2	78	12	88	3	98	13
69	3	79	13	89	4	99	14
						1800	15

P R O B. VI.

To find the Epact for any year.

The *epact* is the number to be added to the lunar year, to make it equal to the solar. This is a cycle depending on the golden number, and is likewise

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will be compleated in 19 years. It increases 11 every year, rejecting 30 when it is above that; but the epact never exceeds 29. Its use is for finding the new moons in March, and from thence in every other month.

I R U L E.

Take 1 from the golden number; and then multiply the remainder by 11, and divide the product by 30, and the remainder is the epact, for the *new stile*. When 0 remains take 29.

This Rule holds from 1700 to 1900, after which the epact so found, must be lessened by 1, and for every 240 years after, it must be lessened by 1 more, continually.

For the *old stile*, multiply the golden number by 11, and divide by 30, for all years.

Examp.

What is the Epact for 1769?

The golden number 3
subt. 1

$$\begin{array}{r} \text{---} \\ 2 \\ 11 \\ \text{---} \\ 30 \overline{) 220} \\ 0 \end{array}$$

22 the epact.

A synodic revolution of the moon is 29.53 + days, and 12 such revolutions are 354.37 days; and the Julian year is 365.25 days, which exceeds these 12 revolutions by 10.88 days. Hence if the moon changes at a certain time in one year, the next year she will change 10.88 days sooner; and the next; 21.76 days sooner; and the next, 32.64
—29.

— 29.53, that is 3.11 days sooner; and so forward. Therefore in any number of years after, if 10.88 be multiplied by that number, and the product divided by 29.53; the remainder will shew how many days the change happens before the fixt time in the first year. But because we do not want to know the fractions or parts of days, but only in general, what day the change happens on; therefore, instead of 10.88 and 29.53, we may take the round numbers 11 and 30, which will give nearly the same remainders.

After 19 years are expired, the cycle begins again, and the changes happen on the same day, and almost on the same hour, as they did 19 years before. For in 19 years, the moon performs 235 revolutions, and $235 \times 29.53 = 6939.69$ days, and $19 \times 365\frac{1}{4} = 6939.75$; the former falling short only about .06 of a day, which is $1^h 28^m$. So that in 19 years, the new moons happen near an hour and a half sooner; which in a little more than 300 years, will be a day sooner. And since the Gregorian is shorter than the Julian year by three days in 400 years, or nine days in 1200 years; and the new moons happen sooner by near four days in 1200 years; it is plain, the new moons will happen later in the Gregorian account by (9 — 4 or) near 5 days in 1200 years; or 1 day in 230 years. Therefore the numbers of this cycle being once adjusted to the golden number, for the year 1700, it will continue the same for above 200 years. And hear the first number of the epact is 0 or 29, and then all the rest follow of course; whence we get the rule above. And since the epacts are to shew how long before a fixt day the moon changes; it is plain the epact is to be diminished 1 in every 230 years.

2 R U L E.

Seek the golden number for the year in the following new table of epacts, and against it, is the
C
epact

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epact sought. This table continues in force till the year 1900; after which the epact must be lessened by 1.

Examp.

Suppose 1769. The golden number for this year is 3, against which is 22, the epact for the said year.

3 R U L E.

Diminish the golden number by 1, seek the remainder in the first column of the old table below, against which is the epact.

Ex.

In 1769, the golden number is 3, therefore against 2 is 22 the epact.

Old Table.		New Table.	
G.Num.	Epact.	G.Num.	Epact.
1	11	1	29
2	22	2	11
3	3	3	22
4	14	4	3
5	25	5	14
6	6	6	25
7	17	7	6
8	28	8	17
9	9	9	28
10	20	10	9
11	1	11	20
12	12	12	1
13	23	13	12
14	4	14	23
15	15	15	4
16	26	16	15
17	7	17	26
18	18	18	7
19	29	19	18

Cor.

CHRONOLOGY.

35

Cor. Having the epact for old stile, that for the new stile may be found by subtracting 11 from the old one.

A. Table of Epacts till 1800.

years	epact	years	epact	years	epact	years	epact
1760	12	1770	3	1780	23	1790	14
61	23	71	14	81	4	91	25
62	4	72	25	82	15	92	6
63	15	73	6	83	26	93	17
64	26	74	17	84	7	94	28
65	7	75	28	85	18	95	9
66	18	76	9	86	0.29	96	20
67	0.29	77	20	87	11	97	1
68	11	78	1	88	22	98	12
69	22	79	12	89	3	99	23
						1800	4

P R O B. VII.

To find the day of the moon's changing in March:

R U L E.

Add 1 to the epact, and subtract the sum from 30, the remainder is the day of the change.

Exam.

The change is required in March 1768.

Epact 11

add 1

12

30

18 day.

C 2

In

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epact sought. This table continues in force till the year 1900; after which the epact must be lessened by 1.

Examp.

Suppose 1769. The golden number for this year is 3, against which is 22, the epact for the said year.

3 R U L E.

Diminish the golden number by 1, seek the remainder in the first column of the old table below, against which is the epact.

Ex.

In 1769, the golden number is 3, therefore against 2 is 22 the epact.

Old Table.		New Table.	
G.Num.	Epact.	G.Num.	Epact.
1	11	1	29
2	22	2	11
3	3	3	22
4	14	4	3
5	25	5	14
6	6	6	25
7	17	7	6
8	28	8	17
9	9	9	28
10	20	10	9
11	1	11	20
12	12	12	1
13	23	13	12
14	4	14	23
15	15	15	4
16	26	16	15
17	7	17	26
18	18	18	7
19	29	19	18

Cor.

CHRONOLOGY.

35

Cor. Having the epact for old stile, that for the new stile may be found by subtracting 11 from the old one.

A Table of Epacts till 1800.

years	epact	years	epact	years	epact	years	epact
1760	12	1770	3	1780	23	1790	14
61	23	71	14	81	4	91	25
62	4	72	25	82	15	92	6
63	15	73	6	83	26	93	17
64	26	74	17	84	7	94	28
65	7	75	28	85	18	95	9
66	18	76	9	86	0.29	96	20
67	0.29	77	20	87	11	97	1
68	11	78	1	88	22	98	12
69	22	79	12	89	3	99	23
						1800	4

PROB. VII.

To find the day of the moon's changing in March:

R U L E.

Add 1 to the epact, and subtract the sum from 30, the remainder is the day of the change.

Exam.

The change is required in March 1768.

Epact 11
 add 1
 ———
 12
 30
 ———
 18 day.

C 2

In

CHRONOLOGY.

In the year 1700, the moon changed on March 20, near four in the afternoon, by the Gregorian stile. The epact then must be 9, that $9 + 1$ or 10 being substracted from 30, there may remain 20, for the day of the change. But the golden number is 10; therefore setting the epact 9 against the golden number 10, all the other numbers in the table of epacts will follow of course.

P R O B. VIII.

To find the day of Easter full moon.

Easter full moon is the first full moon after the 21st day of March, and is called the *paschal full moon*, or *Easter limit*. And it is denoted by the number of days from the beginning of March.

I R U L E.

By the last Prob. find the change day in March for the given year, to which add 15; and if the sum be more than 21, this will be Easter full moon: if less, add 30 to it, and it gives Easter limit.

Examp.

Find Easter full moon for the year 1769.

The day of change March 7
add 15

Easter full moon 22d of March.

2 R U L E.

Find the epact for the year, and substract it from 44; if the remainder is equal or greater than 21, it is the day of full moon: if less, add 30 to it, and it gives Easter limit.

For

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For the *old stile*, subtract the old epact from 47.

Examp.

Let the year be 1769.

44
epact 22

Easter limit 22d day of March.

For the new moon in March is $30 - 1 + \text{epact} = 29 - \text{epact}$; and adding 15 days for full moon, $29 + 15 - \text{epact}$, or $44 - \text{epact} = \text{time of full moon from the beginning of March}$.

3 RULE.

Find the epact in the first column of the following Table, against which in the second column is the day of the paschal full moon; and the letter for that day. This Rule holds till 1900. N. Stile.

C 3

Epacts.

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Epacts.	Pas. full Moon.	
1	12 April	D
3	10 April	B
4	9 April	A
6	7 April	F
7	6 April	E
9	4 April	C
11	2 April	A
12	1 April	G
14	30 March	E
15	29 March	D
17	27 March	B
18	26 March	A
20	24 March	F
22	22 March	D
23	21 March	C
25	18 April	C
26	17 April	B
28	15 April	G
0.29	13 April	E

Examp.

In 1769, the epact is 22, against which we have March 22 for the full moon, and its letter D.

This table is constructed by the 2d Rule.

S C H O L.

It is ordered by Act of Parliament, that the paschal full moon is to be the first full moon after the 21st of March. But it had been more agreeable to the celestial motions, to have made it the first full moon after the vernal equinox. For the equinox is not on March 21, but on March 20. For this reason, the rule laid down in the Act, sometimes fails, as it did in 1761, when the Easter full moon

moon fell on March 20, a little after the equinox; being agreeable to the Table, but different from the Rule.

P R O B. IX.

To find Easter day in any given year.

Easter day (by Act of Parliament) is the first Sunday after the first full moon, next after March 21; and if that full moon be on a Sunday, Easter day is the Sunday following.

But instead of March 21, it should have been the *vernal equinox*, to make the Rule universally true.

Or *Easter day* is the first Sunday after the paschal full moon, or *Easter limit*.

I R U L E.

Add 3 to the day of Easter full moon, or Easter limit (found by the last Prob.), and divide the sum by 7, and subtract the remainder from the dominical letter, (borrowing 7 if need be); add this last remainder to Easter full moon, gives Easter day, reckoned from the beginning of March, N. S.

Note, If the last remainder be 0, take 7 for it; and in leap year, take the letter which serves for the latter part of the year.

The same rule serves for the *old stile*, using the Julian Calendar, &c.

C 4

Exam

CHRONOLOGY.

*Exam.**When does Easter fall, in 1769?*

Easter limit 22 March

$$\begin{array}{r} 3 \\ 7 \overline{)25} 3 \\ 21 \\ \hline 4 \end{array}$$

Letter A = 1 or 8

Last Rem. 4

22

Easter day 26 March.

For since March begins with D, adding 3 to Easter limit, makes the reckoning commence at A. And dividing the whole by 7, the remainder shews how far Easter limit was advanced in the alphabet A, B, C. Let R be that remainder, S the Sunday letter; then $S - R$ the last remainder, shews how much the reckoning falls short of Sunday; which therefore must be added to the limit, to find Sunday; and the sum will be the distance of Easter day from the beginning of March.

Golden

Golden Numb.	Months, Days.	Sun. Let.
14	Mar. 21	C
3	22	D
—	23	E
11	24	F
—	25	G
19	26	A
8	27	B
—	28	C
16	29	D
5	30	E
—	31	F
13	Apr. 1	G
2	2	A
—	3	B
10	4	C
—	5	D
18	6	E
7	7	F
—	8	G
15	9	A
4	10	B
—	11	C
12	12	D
1	13	E
—	14	F
9	15	G
—	16	A
17	17	B
6	18	C
—	19	D
—	20	E
—	21	F
—	22	G
—	23	A
—	24	B
—	25	C

2 RULE.

Find the golden number in the first column of this Table; against which in the 2d column stands the day of Easter full moon. Then look in the 3d column for the Sunday letter next following, and the day of the month, standing against it in the 2d column, is Easter day. This holds from 1700 till 1900, N. S.

Note, If the full moon happens on a Sunday, the next Sunday is Easter day. In leap year, take the letter for the end of the year.

Example.

To find Easter day in 1769.

The golden number is 3, and Sunday letter A. Against 3, stands Mar. 22 and D; and looking down to A, it stands against Mar. 26, which is Easter day.

The same Table will serve to find Easter from 1900, till the beginning of the year 2200, by only placing all the numbers in the first column (except the two last), a line lower. And for each following 100 years, a line lower still.

This Table is taken from the act 1750, for altering the stile; and must always stand good; even tho' it disagree with astronomical calculations.

3 RULE.

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3 RULE.

In the following Table, find the golden number on the side, and go cross over, 'till you come under the Sunday letter at top; and there you will have the day, and the month towards the left hand, when Easter day is. N. S.

A Table to find Easter till 1900.

gold. num.	A	B	C	D	E	F	G
1	Apr. 16	17	18	19	20	14	15
2	Apr. 9	3	4	5	6	7	8
3	Mar. 26	27	28	29	23	24	25
4	Apr. 16	17	11	12	13	14	15
5	Apr. 2	3	4	5	6	Mar. 31	Apr. 1
6	Apr. 23	24	25	19	20	21	22
7	Apr. 9	10	11	12	13	14	8
8	Apr. 2	3	Mar. 28	29	30	31	Apr. 1
9	Apr. 16	17	18	19	20	21	22
10	Apr. 9	10	11	5	6	7	8
11	Mar. 25	27	28	29	30	31	25
12	Apr. 16	17	18	19	13	14	15
13	Apr. 2	3	4	5	6	7	8
14	Mar. 26	27	28	22	23	24	25
15	Apr. 16	10	11	12	13	14	15
16	Apr. 2	3	4	5	Mar. 30	31	Apr. 1
17	Apr. 23	24	18	19	20	21	22
18	Apr. 9	10	11	12	13	7	8
19	Apr. 2	Mar. 27	28	29	30	31	Apr. 1

Examp.

In 1769, the golden number is 3, and dominical letter A.

Under A and against 3, is March 26 for Easter day.

This

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This Table is easily compos'd from the last, thus. Let the golden number be 1; against it we find Apr. 13, and the letter E; which being Sunday letter, Easter Sunday is Apr. 20. But the Sunday letters being F, G, A, B, C, D; we find Apr. 14, 15, 16, 17, 18, 19, for Easter Sunday, respectively. And so of the rest.

A Table for finding Easter day till 1800.

year	East. d.	year	East. d.	year	East. d.	year	East. d.
1760	Apr. 6	1770	Apr. 15	1780	Mar. 26	1790	Apr. 4
61	Mar. 22	71	Mar. 31	81	Apr. 15	91	Apr. 24
62	Apr. 11	72	Apr. 19	82	Mar. 31	92	Apr. 8
63	Apr. 3	73	Apr. 11	83	Apr. 20	93	Mar. 31
64	Apr. 22	74	Apr. 3	84	Apr. 11	94	Apr. 20
65	Apr. 7	75	Apr. 16	85	Mar. 27	95	Apr. 5
66	Mar. 30	76	Apr. 7	86	Apr. 16	96	Mar. 27
67	Apr. 19	77	Mar. 30	87	Apr. 8	67	Apr. 16
68	Apr. 3	78	Apr. 19	88	Mar. 23	98	Apr. 8
69	Mar. 26	79	Apr. 4	89	Apr. 12	99	Mar. 24
						1800	Apr. 13

Cor. 1. Hence, the times of all the moveable feasts, that depend upon Easter, may be known.

Septuagesima Sunday is 9 weeks

Sexagesima Sunday is 8 weeks

Shrove Sunday, or quinquagesima, is 7 weeks

Shrove Tuesday, Ash-wednesday, next following } before Easter.

Quinquagesima is 6 weeks

Palm Sunday a week

Good Friday 2 days

Low Sunday is 1 week

Rogation Sunday is 5 weeks

Ascension day, or Holy Thursday, the Thursday after Rogation, } after Easter.

Whit-sunday is 7 weeks

Trinity Sunday is 8 weeks

Then

Then follow all the Sundays after Trinity in order. The Sundays between Ash-wednesday and Easter, are called Sundays in Lent; and the Sundays between Easter and Whit-sunday, are called Sundays after Easter.

Note, The distance of Easter Sunday from March 21, is by some called, the *Number of Direction*.

Cor. 2. From the Table, Rule 2, it appears, that Easter can never fall sooner than Mar. 22, nor later than Apr. 25.

SCHOLIUM.

I have not shewn how to find any of the common chronological notes or numbers, for years before Christ; as it is more material to know what is to come, than what is past. But that is easily done, by reckoning backward, so far as we need to go. Remembering that the first year current before Christ, is the next (backward) to the first year current after Christ. Before 1582 there was no Gregorian year, and 46 years before Christ, there was no Julian year. And to what purpose can it be, to seek for any note, according to either Julian or Gregorian year, at a time when there was no Julian or Gregorian year existing.

If the arithmetical rule, for finding Easter, happens to differ from the table in the 2d rule, it must be set aside. For that table is settled by the stile act, to be the general rule; altho' the act at the same time lays down another, which is sometimes inconsistent with the table. For the act says, that Easter day, is to be the first Sunday after the first full moon, next after the 21st of March. Which rule would have made Easter a month later than by the table, in the year 1761. Whereas if it had been mentioned, *after the first full moon, next*

after the vernal equinox, which was the 20th of March; then the rule would have agreed with the table. And more instances of this kind may happen.

But after all the fuss that has been made for finding a rule for the observation of Easter; the present rule is certainly a very ill contrived one; and had been better fixt to some Sunday, at a certain time of the year. Jesus Christ did but suffer once, and rise once; which therefore must have been at one certain time of the year. And if that time could be known, then the nearest Sunday to that, would most properly be Easter Sunday; which would have been easily known. But our rule makes it vary 5 weeks from the time, as observed in different years.

It is extremely probable that his passion was in the year 34, on Friday the 14th day of the Month *Nisan*, which by the Julian account, was on Friday April 23; and at that time the equinox was on March 24. But with us now, the equinox is upon the 20th of March, which is 4 days sooner. Therefore bringing the passion back to our way of reckoning, it will fall on April 19, and consequently the resurrection would be on April 21. Therefore if the nearest Sunday to April 21, had been set apart for Easter day, it would have been an exceeding easy rule, and very near the true time; and I think this time might have been as well commemorated by an easy and plain rule, that comes near the true time; as a perplext one, that runs further from it.

PROB.

CHRONOLOGY.

PROB. X.

To find in what year Easter day shall fall on the 25th of April.

Suppose the present year to be 1769; the cycle of the sun is 14, dominical letter A, golden number 3.

But by the last table in Prob. IX. when Easter day falls on April 25, the dominical letter is C, and golden number 6. Therefore look into the I new cycle (Prob. IV), and reckon from 14 to all the places where you find C, which will be after 4, 10, 15, 21 places; and that is 4, 10, 15, 21 years after 1769. Then if a be the revolutions of the sun's cycle, e the revolutions of the golden number; and since the golden number 6 exceeds the present golden number (3) by 3; the time will be expressed by any of the following equations. Therefore if a or e be found, the time will be known.

$$\left. \begin{array}{l} 1. 28a + 4 = 19e + 3 \\ 2. 28a + 10 = 19e + 3 \\ 3. 28a + 15 = 19e + 3 \\ 4. 28a + 21 = 19e + 3 \end{array} \right\} \begin{array}{l} = \text{number of years} \\ \text{hence.} \end{array}$$

Therefore by reduction, we get the following equations.

$$1. 28a + 1 = 19e.$$

$$2. 28a + 7 = 19e.$$

$$3. 28a + 12 = 19e.$$

$$4. 28a + 18 = 19e.$$

These equations being resolved, and the least values of a found, we have $1.a = 2$, $2.a = 14$, $3.a = 5$, $4.a = 17$. Here 2 being the least value of a , $28a + 4 = 60$, and $1769 + 60 = 1829$
for

for the year; which shews, it will not happen in this century.

Again in the year 1800, the sun's cycle is 17, and (by the II new cycle, Prob. IV.) the dominical letter E, and the golden number 15. Therefore in II new cycle (Prob. IV.) reckon from 17 to all the places of C, and we shall find 2, 13, 19, 24. And since $6 + 19 - 15 = 10$. Therefore we shall have the following equations.

$$\left. \begin{array}{l} 28a + 2 = 19e + 10 \\ 28a + 13 = 19e + 10 \\ 28a + 19 = 19e + 10 \\ 28a + 24 = 19e + 10 \end{array} \right\} \text{or} \left\{ \begin{array}{l} 28a - 8 = 19e. \\ 28a + 3 = 19e. \\ 28a + 9 = 19e. \\ 28a + 14 = 19e. \end{array} \right.$$

By the first equation $a = 3, 22, \&c$; by the second $a = 6$; by the 3d, $a = 18$, and by the 4th, $a = 9$. Taking $a = 3$, $28a + 2 = 86$ years, and therefore 1886 is the first year that this thing will happen, and the only year in the next century; for all the other values of a are too big, as running into the next century after.

And in the same manner we must proceed, if any other day be assigned for Easter.

SCHOLIUM.

If this Prob. was to be resolved by the Julian account, it need not be repeated, because we are stopt by no centuries, as in the Gregorian account. But in the Julian, time runs on in the same way for ever. And therefore after 532 years, which is the period for Easter, or the Dionysian period, all the days and years return again in the same order, in the Julian account.

PROB.

CHRONOLOGY.

PROP. XI.

To find the day of the month, when the sun enters the 12 Signs.

R U L E.

Beginning at March for the Sign Aries. Then
The days, for the first four couples, will be,

20, 21, 22, 23.

There's four more months, for them will be seen,

22, 21, 19 and 18.

That is,

In March and April, on the 20th, for ♈ and ♉.

In May and June, on the 21st, ♊, ♋.

In July and August, on the 22d, ♌, ♍.

In September and October, on the 23d, ♎, ♏.

In November, on the 22d, ♐.

In December, on the 21st, ♑.

In January, on the 19th, ♒.

In February, on the 18th, ♓.

Cor. Hence will be known the place of the sun, on any day; by reckoning a degree for every day from the entrance.

Exam.

What is the sun's place Oct. 10? The sun enters Libra on the 23d of September, and October 10 is 17 days after; therefore the sun's place is $\approx 17^\circ$.

PROB. XII.

To find the time of sun-rising or setting at any time, for the middle of England.

R U L E.

Remember that on March 20, and September 23, the sun rises and sets at 6. Then at 1, 2, or 3 months

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months distance, reckon 1, 2 or $2\frac{1}{2}$ hours sooner or later; and so in proportion.

Examp.

On May 1, the time of sun-set is required.

On Apr. 20th (being a month from March 20th) the sun rises one hour sooner, that is, at 5; and May 1st, (being $\frac{1}{3}$ of a month after) gives 20 minutes more. So the time of rising, May 1st, is $4^h 40^m$; and setting, $7^h 20^m$.

P R O B. XIII.

To find the day of the moon's changing in any month; or her age, on any day thereof.

R U L E.

To the Epact add the number of the month beginning at March, and take the sum from 30 (or 60), gives the day of the change: or that sum added to the day of the month, gives her age, rejecting 30 if it exceeds 30.

Note, In January and February the epact of the preceding year must be used.

This Rule sometimes varies a day, owing partly to the inequality of the months, and partly to the irregular motion of the moon.

Examp.

To find the change in July 1769, and her age the 20th day.

Epact	22	27
Month	5	20

Subt.	27	47
From	30	Sub. 30

Change	3d day	17 her age.
--------	--------	-------------

D

The

C H R O N O L O G Y.

The cycle of epacts is so contrived, that at the beginning of it, the moon changes at the beginning of March; and likewise at the end of it, about the 29th or 30th day. Whence in any following year, the epact will shew the number of days the change happens, before the end of March. And since the months are each, about a day longer than the time of one lunation; therefore we must add so many days as there are months past, from March; whence that sum taken from 30 gives the day of the change. And that day subtracted from a given day of the month, gives her age; that is, the given day $- 30 + \text{sum} = \text{age}$.

2 R U L E.

Look for the month in the new Calendar at the end, and find the golden number for the year in the second column; against it stands the day of the change.

If you use the Calendar in the stile act, the golden number finds the full moon.

Exam.

To find the change of the moon in July 1769.

The golden number for the year is 3, which in July stands against the 3d day of the month, for the change day.

3 R U L E.

Look for the golden number in the proper month in the old Calendar, against which is the old change day; then reckon six days further, and you have the day of the change by the new stile.

Exam.

To find the change in July 1769.

The golden number is 3, and stands at the 27th day. Reckoning six further, falls on the 2d of August.

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August. Or rather seek 3 in June, which stands at the 27th day; from which reckoning six more, it falls on the 3d of July for the change.

For in the old Calendar, the moon is 4 or 5 days back, and the new stile eleven days forward; therefore the change is, by the new stile ($11 - 5 =$) 6 days forward of the old stile, or sometimes ($11 - 4$ or) 7 days.

P R O B. XIV.

To find the time of the Moon's southing.

R U L E.

Take 8 tenths of the moon's age in days, gives the hour of her southing.

Examp.

On July 10, 1769, the moon is seven days old.

7
.8

—
 $5.6 = 5^h 36^m$, the southing.

For the synodic revolution of the moon being $29\frac{1}{2}$ days, whilst she gains 24 hours of the sun; therefore in one day she will gain $\frac{24}{29\frac{1}{2}} = .81$ of an hour. And in any number of days, so many times .81, or 8 tenths.

Cor. *To find the time of high water at London Bridge, add three hours to the time of her southing.*

D 2

PROB.

CHRONOLOGY.

PROB. XV.

To find the Moon's place in the Zodiac, on any day.

Find the sun's place for that day, to which add 4 tenths of the moon's age in days; that is, so many signs; and you have the moon's place.

Example.

To find the moon's place July 20, 1769.

Moon's age 17

. 4

6. 8

or

6° 24'

Sun's place

3 28

Moon's place 10 22

Or Aquarius 22°

For in $29\frac{1}{2}$ days the moon gains 12 signs of the sun; and in one day she leaves the sun $\frac{12}{29\frac{1}{2}}$ or $\frac{4}{10}$ of a sign. And in any number of days, she will be so many times $\frac{4}{10}$ of a sign before him, or more exactly .407, before him.

Cor. The moon leaves the sun 12 degrees, or rather 12.2 degrees, in a day. And $\frac{2}{5}$ the moon's age gives the moon's distance from the sun, in signs.

PROB.

PROB. XVI.

To find the time of moon rising or setting.

I RULE.

Find the moon's southing, or how many hours she souths after noon. Take half this number of hours, and reckon so many months forward from the time given. Find the hour of sun-set, for the time you reckon to; this will be the moon's semi-diurnal arch, or half the time of her shining.

Then add the semidiurnal arch to the southing, gives the setting; or subtract it, and it gives her rising.

Note, between the change and the full, you need only find her setting, for she rises in the day-time. And from the full to the change, her rising; for then she sets in the day.

Example.

July 20th, 1760.

Moon's southing $13.6 = 13^h 36^m$.

half — 6.8 months.

6 months from July 20, is Jan. 20th.

And 6.8 months from July 20th, is Feb. 14.

The sun sets on Feb. 14th, at $5^h 0^m$ subst.

from moon's southing, $13 \ 36$

moon rise $8^h 36^m$, at night.

For when the moon souths 12 hours after the sun, she is got six signs from him, and then is where the sun would be six months after; and whatever her southing be, she is advanced so far, as the sun would be, after half that number of months. And when she is there, her semidiurnal arch is equal to the sun's, or equal to the hours of

D 3

sun-set.

fun-set. And this is the arch the moon has to describe after her southing.

2 RULE.

Find the moon's place in the zodiack, and the sun's semidiurnal arch when he is there; which will also be the moon's.

Then to $\frac{3}{10}$ the moon's age, add the semidiurnal arch, for the setting; or subtract it, for the rising.

Examp.

On July 10th, 1769. The moon's age is 7, and her place $6^{\circ} 12'$, and her semidiurnal arch $5^{\text{h}} 40^{\text{m}}$.

$$\begin{array}{rcl} \frac{3}{10} \text{ her age} & 5.6 = 5^{\text{h}} 36^{\text{m}} \\ \text{add} & - & 5 \quad 40 \\ \hline \end{array}$$

Moon sets at $11^{\text{h}} 16^{\text{m}}$ at night.

For $\frac{3}{10}$ of her age is the time of her southing, and her semidiurnal arch is the same as in the first Rule.

Cor. 1. Hence the time of the moon's shining is twice the semidiurnal arch found above.

Cor. 2. From hence it is easy to know how long the moon shines after sun-set, or before sun-rise. Thus,

To the southing add the semidiurnal arch, and subtract the time of sun-set; for the hours of shining after sun-set.

And to the time of sun-rise add the semidiurnal arch, and subtract the southing (after 12 is abated), and you have the hours of shining before sun-rise.

For the moon's setting — the sun's setting = hours of shining after sun-set. And sun-rise — moon-rise = hours of shining before sun-rise.

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SCHOLIUM.

These rules will sometimes vary an hour or more, which is occasioned by the moon's latitude, and irregular motion. The six last Problems are properly astronomical; but having so near a relation to Chronology, are put here; and serve well enough for computing these things for ordinary use, and are easily wrought.

P. R. O B. XVII.

To find the Roman indiction.

The *Roman indiction*, was a term or period of fifteen years, of use among the Romans. For once in fifteen years, they collected a tribute or tax from such countries as they had conquered. But this period is of no manner of use now, but only as it is an ingredient in the Julian period. To find it,

RULE.

Add 3 to the year of Christ, and divide by 15, the remainder is the indiction. If 0 remains, take 15.

Exam.

For the year 1769

add 3

1772

15)1772(118

15

27

15

122

122

120

2 the indiction.

D 4

SCHO-

S C H O L.

There is an old rule which will give the Golden number, Cycle of the Sun, and Roman Indiction, all at once; 'tis this,

*When 1, 9, 3, to the year has added been,
Divide by 19, 28, 15.*

P R O B. XVIII.

To convert one Era or period into another.

R U L E.

We must first know what year of any Era or period, answers to the first year of Christ (or any other Era); or what year of Christ answers to the first year of any period or Era. Then 1 subtracted from that year, gives the reducing number.

Or thus, find how many years one Era begins before the other; and that will be the reducing number; which being added or subtracted as the case requires, gives the correspondent year complete in all cases; and likewise the year current in all cases, except when they run contrary ways; and then a unit must be added to one of the numbers to make them correspond.

Ex. I.

What year of the Julian period answers to 1769 of the Christian Era?

The Julian period begun 4713 years before Christ, therefore to

	1769
add	4713
	————

Answer, 6482d year. I. P.

Ex.

Examp. 2.

What year of Christ answers to the 4635th year of the Julian period?

Here 4713 should be subtracted from 4635, but it being bigger, we must subtract the other from it, and the remainder will be years before Christ.

$$\begin{array}{r} 4635 \\ -4713 \\ \hline \end{array}$$

— 78 years compleat.

But because the year of Christ is running backward, it will be the 79th year current before Christ.

Ex. 3.

What year of the Era of Nabonassar answers to 1769 of the Christian Era?

The Christian Era began 747 years after that of Nabonassar.

$$\begin{array}{r} \text{To} \quad 747 \\ \text{add} \quad 1769 \\ \hline 2516 \text{ year} \\ \hline \end{array}$$

Ex. 4.

What year of Christ answers to the 20th of Nabonassar?

$$\begin{array}{r} 20 \\ -747 \\ \hline \end{array}$$

— 727 years compleat.

before Christ 728 years current.

Ex. 5.

What year of the Hegira of the Turks, answers to the 30th year before the Yezdegird of the Persians?

The

CHRONOLOGY.

The Hegira begun 10 years before the Yezdegird.

from 30

sub. 10

20 year current or compleat.

S C H O L.

In using any period, if the number be more than the period; divide by that period, and the remainder is the number of the year.

P R O B. XIX.

Having the cycles of the sun and moon; to find the year of the Dionysian period.

R U L E.

Multiply the cycle of the sun by 57, and the cycle of the moon by 476; add the products together, which divide by 532, the remainder is the year required.

Examp.

Let the cycle of the sun be 17, and of the moon 11;

$$17 \times 57 = 969$$

$$476 \times 11 = 5236$$

$$532 \overline{) 6205} \text{ (11 periods,}$$

$$532 \cdot$$

$$885$$

$$532$$

the year 353 of the period.

Investigation. Find two numbers 28x and 19y, that being respectively divided by 28 and 19, will leave no remainder; but divided alternately by 19 and 28 will leave 1; that is, $\frac{28x}{19}$ leaves 1, and

19y

$\frac{19y}{28}$ leaves 1. Whence $\frac{28x - 1}{19} =$ a whole number, $= x + \frac{9x - 1}{19}$, therefore $\frac{9x - 1}{19} =$ a whole number $= p$, and by reduction, $x = \frac{19p + 1}{9} = 2p + \frac{p + 1}{9}$; therefore $\frac{p + 1}{9} =$ a whole number $= q$; whence $p = 9q - 1$; the least value of q is 1, therefore $p = 8$, $x = \left(\frac{19p + 1}{9} =\right) 17$, and $28x = 476 = A.$

Again, $\frac{19y - 1}{28} =$ a whole number $= p$, then $y = \frac{28p + 1}{19} = p + \frac{9p + 1}{19}$, and $\frac{9p + 1}{19} =$ a whole number $= q$, and $p = \frac{19q - 1}{9} = 2q + \frac{q - 1}{9}$; therefore $\frac{q - 1}{9} =$ a whole number $= r$, and $q = 9r + 1$; and the least value of r is 0, then $q = 1$, $p = \left(\frac{19q - 1}{9} =\right) 2$, $y = \left(\frac{28p + 1}{19} =\right) 3$; and $19y = 57 = B.$

Now if A be multiplied by any number n , and dividing by 19, it will leave n remaining, but divided by 28 will leave 0.

Also if B be multiplied by any number m , and divided by 28, it will leave m remaining; but divided by 19 it leaves 0.

Therefore $nA + mB$ divided by 28, will leave m (17); and divided by 19, will leave n (11); therefore $nA + mB$ is the year of the period. But since this may exceed 28×19 or 532; therefore divide by 532, and the remainder is the year of the period.

Cor.

CHRONOLOGY.

Cor. The year of the Dionysian period being given; the cycles of the sun and moon are found, by dividing respectively by 28 and 19; for the remainder is the number of the cycle.

PROB. XX.

Having the Cycles of the Sun, Moon, and Indiction; to find the year of the Julian period.

RULE.

Multiply the cycle of the sun by 4845,
the cycle of the moon by 4200,
the cycle of indiction by 6916,
divide the sum of the products by 7980, the remainder is the year of the Julian period.

Examp.

Let the Sun's Cycle be 17, the Moon's 11, the Indiction 6.

$$4845 \times 17 = 82365$$

$$4200 \times 11 = 46200$$

$$6916 \times 6 = 41496$$

$$\begin{array}{r} 7980 \overline{) 170061} \text{ (21 periods.} \\ 15960 \cdot \\ \hline 10461 \\ 7980 \\ \hline \end{array}$$

the year 2481, of I. P.

Investigation. Since $28 \times 19 \times 15 = 7980$, and $28 \times 19 = 532$, $28 \times 15 = 420$, $19 \times 15 = 285$. First find three numbers 532 * (A), 420y (B), 285z (C); that being respectively divided 532, 420, and 285, will leave 0 remaining. But the first divided by 15 leaves 1, the second by 19 leaves 1, the third by 28 leaves 1.

Pro-

Proceeding as in the last Problem, you will find $x = 13$, $y = 10$, $z = 17$; and $532x = 6916 = A$; $420y = 4200 = B$; and $285z = 4845 = C$; as may be easily tried by dividing.

Therefore, as in the last, $nA + mB + pC$ divided by 15, 19, and 28 respectively, will leave the remainders n , m , and p ; and therefore $nA + mB + pC$ is the year of the period, or the remainder, after it is divided by 7980. For the quotient only shews how many periods are elapsed.

Cor. The year of the Julian period being given, the cycles of the sun, moon, and indiction are found, by dividing by 28, 19 and 15 respectively; the remainder is the number of the cycle.

P R O B. XXI.

To explain the Calendar, its nature and construction.

A Calendar is a table containing 12 months, with all the days of these months, set down in order. And the months are also divided into weeks by the 7 first letters of the alphabet. On the top of the following Calendar, you have the name of each month; in the first column are the days of the month, numbered 1, 2, 3, &c. In the second column you have the letters of the week days, and the golden numbers. In the third column are the holidays, and other remarkable fixt days, set against the proper days of the month.

Among the letters, that which stands for Sunday at the beginning of the year, will be the Sunday letter for all the year, and will point out all the Sundays. And the like for the rest of the letters, the same letter always denoting the same day of the week quite thro' the year.

The

The golden numbers are so disposed, that the golden number for any year, stands against the day of the moon's changing, in every month. But as these numbers only shew the mean time of the conjunction, they may sometimes vary a day from the heavens; and as these numbers are calculated to the present time; after the beginning of the year 1800, these numbers must be placed (or supposed to be placed) a day later or lower in the Calendar.

If the full moon be required, it is only reckoning fifteen days from the change, and then it will agree with the new Calendar.

CHRONOLOGY.

The CALENDAR.

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JANUARY.			FEBRUARY.		
mon. days.	letters gol. n.	Holy days and other days.	mon. days.	letters gol. n.	Remarkable days.
1	A 9	<i>New year's day.</i>	1	D	Bridget.
2	B		2	E 17	<i>Candlemas day.</i>
3	C 17		3	F 6	
4	D 6		4	G	
5	E		5	A 14	Agatha V. & M.
6	F 14	<i>Twelfth day.</i>	6	B 3	Dorothea.
7	G	Julian.	7	C	
8	A 3	Lucian M.	8	D 11	
9	B 11		9	E 19	
10	C		10	F	
11	D 19		11	G 8	
12	E 8		12	A 16	
13	F	Hillary.	13	B	
14	G 16	Fœlix.	14	C 5	Valentine B & M.
15	A		15	D	
16	B 5		16	E 13	
17	C 13	Anthony.	17	F 2	
18	D	Prisca, V. & M.	18	G	
19	E 2		19	A 10	
20	F 10	Fabian, B. & M.	20	B 18	
21	G	Agnes, V. & M.	21	C	
22	A 18	Vincent M.	22	D 7	
23	B 7		23	E 15	<i>St. Matthias.</i>
24	C	Timothy.	24	F	
25	D 15	<i>Conv. St. Paul.</i>	25	G 4	
26	E 4		26	A	
27	F		27	B 12	
28	G 12		28	C 1	
29	A			D	
30	B 1				
31	C 9				

The

CHRONOLOGY.

The CALENDAR.

MARCH.			APRIL.		
mon. days.	letters gol. n.	Remarkable days.	mon. days.	letters gol. n.	Remarkable days.
1	D 9	St. David.	1	G	
2	E	Chad B.	2	A 17	
3	F 17		3	B 6	Richard.
4	G		4	C	St. Ambrose.
5	A 6		5	D 14	
6	B 14		6	E 3	
7	C		7	F	
8	D 3	Philemon.	8	G 11	
9	E 11		9	A 19	
10	F 19		10	B 8	
11	G		11	C	
12	A 8	Gregory.	12	D 16	
13	B		13	E 5	
14	C 16		14	F	Perpetua.
15	D 5		15	G 13	
16	E		16	A 2	
17	F 13	St. Patrick.	17	B	
18	G 2	Edward.	18	C	
19	A		19	D 10	
20	B 10	St. Cuthbert.	20	E 18	
21	C 18	Benedict.	21	F	
22	D		22	G 7	
23	E 7		23	A 15	St. George M.
24	F		24	B	
25	G 15	Lady day.	25	C 4	St. Mark.
26	A 4		26	D	
27	B		27	E 12	
28	C 12		28	F 1	
29	D 1		29	G	
30	E		30	A 9	Jacob.
31	F 9				

The

CHRONOLOGY.

The CALENDAR.

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MAY.

mo. da.	lett. g. n.	Remarkable days.
1	B 17	St. Ph. & Ja. May
2	C	day.
3	D 6	
4	E	
5	F 14	
6	G 3	Silvanus.
7	A	
8	B 11	
9	C 19	
10	D	
11	E 8	
12	F 16	
13	G 5	
14	A	
15	B 13	
16	C 2	
17	D	
18	E 10	
19	F	Prudent. V.
20	G 18	
21	A 7	
22	B	
23	C 15	
24	D 4	
25	E	
26	F 12	
27	G 1	Bede, V.
28	A	
29	B 9	
30	C	
31	D 17	

JUNE.

mo. da.	lett. g. n.	Remarkable days.
1	E 6	
2	F	
3	G 14	
4	A 3	
5	B	Boniface, M.
6	C 11	
7	D 19	
8	E	
9	F 8	
10	G	
11	A 16	St. Barnabas.
12	B 5	
13	C	
14	D 13	
15	E 2	
16	F	
17	G 10	St. Alban, M.
18	A 18	
19	B	
20	C 7	
21	D 15	
22	E	
23	F 4	
24	G 12	St. John Bapt.
25	A	
26	B 1	
27	C 9	
28	D	
29	E 17	St. Peter.
30	F 6	Lucina.

E

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JULY.			AUGUST.		
mo. da.	lett. g. n.	Remarkable days.	mo. da.	lett. g. n.	Remarkable days.
1	G		1	C	<i>Lammas day.</i>
2	A 14		2	D 3	
3	B 3	Cornelius.	3	E 11	
4	C		4	F	
5	D 11		5	G 19	
6	E		6	A	
7	F 19	Tho. a Becket.	7	B 8	
8	G 8		8	C 16	
9	A		9	D	
10	B 16		10	E 5	St. Laurence M.
11	C 5		11	F 13	
12	D		12	G	Clara V.
13	E 13		13	A 2	
14	F 2		14	B 10	
15	G	Swithin B.	15	C	
16	A 10		16	D 18	
17	B		17	E	
18	C 18		18	F 7	Helena.
19	D 7		19	G 15	
20	E	Margaret V&M.	20	A	Bernard.
21	F 15		21	B 4	
22	G 4	St. M. Magdalen	22	C 12	
23	A		23	D	
24	B 12	Christiana.	24	E 1	St. Bartholomew
25	C 1	St. James.	25	F 9	
26	D	St. Ann.	26	G	
27	E 9		27	A 17	
28	F 17		28	B 6	Augustine.
29	G	Martha.	29	C	
30	A 6		30	D 14	
31	B 14		31	E 3	

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SEPTEMBER.			OCTOBER.		
mo.	lett.	Remarkable	mo.	lett.	Remarkable
da.	g. n.	days.	da.	g. n.	days.
1	F	Giles.	1	A	Remigius, B.
2	G 11		2	B 11	
3	A		3	C 19	
4	B 19		4	D	Francis.
6	C 8		5	E 8	
5	D		6	F	Faith V. & M.
7	E 16		7	G 16	Julia.
8	F 5	Nat. V. Mary.	8	A 5	
9	G		9	B	S. Dennis.
10	A 13		10	C 13	
11	B 2		11	D 2	
12	C		12	E	
13	D 10		13	F 10	
14	E	h. Rood d. h. cr.	14	G 18	
15	F 18		15	A	
16	G 7		16	B 7	
17	A	Lambert B & M.	17	C 15	Etheldred V.
18	B 15		18	D	St. Luke.
19	C 4		19	E 4	
20	D		20	F	
21	E 12	St. Matthew.	21	G 12	Urfula.
22	F		22	A 1	
23	G 1		23	B	
24	A 9		24	C 9	
25	B 17		25	D 17	Crispin.
26	C	S. Cyprian.	26	E	
27	D 6		27	F 6	
28	E		28	G 14	St. Simon & Jude.
29	F 14	St. Michael.	29	A	
30	G 3	St. Jerome.	30	B 3	
			31	C 11	

NOVEMBER.			DECEMBER.		
mo. da.	lett. g. n.	Remarkable days.	mo. da.	lett. g. n.	Remarkable days.
1	D	<i>All Saints.</i>	1	F 19	
2	E 19	<i>All Souls.</i>	2	G	
3	F 8		3	A 8	
4	G		4	B	<i>Barbara.</i>
5	A 16		5	C 16	
6	B 5	<i>Leonard.</i>	6	D 5	<i>Nicholas, B.</i>
7	C		7	E	
8	D 13		8	F 13	
9	E 2		9	G 2	
10	F		10	A	
11	G 10	<i>St. Martin B & C.</i>	11	B 10	
12	A		12	C 18	
13	B 18	<i>Brice.</i>	13	D	<i>Lucy, V. & M.</i>
14	C 7		14	E 7	
15	D	<i>Machute.</i>	15	F 15	
16	E 15		16	G	
17	F 4	<i>Hugh, B.</i>	17	A 4	
18	G		18	B 12	
19	A 12	<i>Elizabeth.</i>	19	C	
20	B	<i>Edmund.</i>	20	D 1	
21	C 1		21	E	<i>St. Thomas.</i>
22	D 9	<i>Cecilia.</i>	22	F 9	
23	E	<i>St. Clem. B & M.</i>	23	G 17	
24	F 17		24	A	
25	G 6	<i>Catharine.</i>	25	B 6	<i>Christmas day.</i>
26	A		26	C 14	<i>St. Stephen.</i>
27	B 14		27	D	<i>St. John Evan.</i>
28	C 3		28	E 3	<i>Innocents.</i>
29	D		29	F 11	
30	E 11	<i>St. Andrew.</i>	30	G	<i>S. Roger.</i>
			31	A 19	<i>Silvester, B.</i>

Cor. Hence it will be no hard matter to compose an Almanack, from what has been laid down before.

For in the first place you must have a Calendar, which is the basis of all the work; in this, the fixt days are already placed. Then the chronological notes for the year; then all the moveable days are next to be inserted, and likewise the law days; all the sundays, and holidays, whether fixt or moveable, are put in red letters for distinction. The law terms are these,

Easter term begins 17 days after Easter, and ends the Monday following Ascension day.

Trinity term begins 12 days after Whitsuntide, and continues 19 days.

Michaelmas term begins the 9th or 10th of October, and ends the 25th or 29th of November.

Hillary term begins Jan. 23 or 24, and ends Feb. 12 or 13.

Likewise the University terms may be put in if any one pleases.

The next thing to be done, is. to put into separate columns the rising and setting of the sun, the rising, southing, and setting of the moon, and likewise the change and full, and quarters of the moon; and such other astronomical matters as may be thought useful.

But to have an Almanack compleat, all the Celestial Phenomena ought to be put in, such as the Sun and Moon's places and declinations; the heliocentric and geocentric places of all the planets, with their latitudes; the moon's place and latitude; the rising, southing and setting of the planets; the eclipses of the luminaries; the aspects of all the planets; the places and eclipses of Jupiter's satellites; the southing of the stars, the beginning and end of twilight; the equation of time, the sun's right ascension, and other such like things. Most

of these things vary every year, and therefore an Almanack lasts but for one year.

There are four things, which ought always to be kept in memory: the year, the month, the day of the month, and day of the week.

I shall now insert a Chronological Table, shewing the times when the most noted events happened, which are mentioned in History; such as the changes of Kingdoms, the rise and fall of Monarchies, the lives of famous men, and such like things. And tho' the Chronology of antient times is very uncertain, yet it may not be amiss to know within a little, when such or such a transaction happened; altho' by reason of the great distance of time, it cannot be known so accurately as we could wish.

A CHRONOLOGICAL TABLE.

The Time is shewn in Years before and since CHRIST.

	ye. bef. Christ.
T HE Creation of the World according to <i>Moses</i> ; <i>Adam</i> made. By some Accounts 4000, by others 5508, by others 3956 years, ———	3950
<i>Seth</i> , the son of <i>Adam</i> , born —	3820
<i>Enos</i> , the son of <i>Seth</i> , born —	3715
<i>Cainan</i> , the son of <i>Enos</i> , born —	3625
<i>Mahaleel</i> , the son of <i>Cainan</i> , born —	3555
<i>Jared</i> born, the son of <i>Mahaleel</i> , —	3490
<i>Enoch</i> born, the son of <i>Jared</i> , —	3328
<i>Mathusalem</i> born, the son of <i>Enoch</i> , —	3263
<i>Lamech</i> born, the son of <i>Mathusalem</i> , —	3076
<i>Adam</i> dies, aged 930 years, —	3020
<i>Noah</i> born, the son of <i>Lamech</i> , —	2894
<i>Noah</i> begins to build the ark, —	2414
<i>Mathusalem</i> dies, aged 969 years, the oldest man, —	2294
The ark finished. <i>Noah</i> 's flood, or the universal deluge, that drowned the world, —	2294
The tower of <i>Babel</i> building, and the confusion of languages, —	2131
The Chaldeans now began to observe the stars. —	
<i>Noah</i> dies, 950 years old, —	1944
The vocation of <i>Abraham</i> , —	1927
A famine causes <i>Abraham</i> to go into Egypt, —	1926
<i>Sodom</i> and <i>Gomorrab</i> burnt, —	1903
<i>Isaac</i> born, the son of <i>Abraham</i> , —	1902
<i>Jacob</i> born, the son of <i>Isaac</i> (afterwards called <i>Israel</i>) —	1842
<i>Joseph</i> born, the son of <i>Jacob</i> , —	1751

	ye. bef. Christ.
<i>Job</i> living, the son of <i>Iffachar</i> .	
A great famine causes <i>Jacob</i> and his family to go into <i>Egypt</i> , — — —	1712
<i>Jacob</i> dies in <i>Egypt</i> , 147 years old, — — —	1695
<i>Joseph</i> also dies in <i>Egypt</i> , aged 110 years, — — —	1641
<i>Moses</i> born, — — —	1577
The king of <i>Egypt</i> orders all the male children of the Hebrews to be killed, — — —	1573
The children of <i>Israel</i> go out of <i>Egypt</i> , and <i>Pharoah</i> and his army drowned in pursuing them, — — —	1496
<i>Joshua</i> defeats the <i>Gibeonites</i> ; and the sun stands still, — — —	1458
<i>Moses</i> dies, 120 years old, — — —	1457
<i>Joshua</i> dies, 110 years old, — — —	1433
<i>Gideon</i> , judge of <i>Israel</i> , defeats the <i>Midianites</i> , — — —	1271
<i>Ruth</i> .	
<i>Sennacherib</i> kills his 70 brethren, and governs the Jews, — — —	1239
<i>Mephres</i> , king of upper <i>Egypt</i> , — — —	1125
<i>Mispbragmutbosis</i> reigned over all <i>Egypt</i> , and drove out the shepherds, — — —	1120
<i>Ogyges</i> , his flood. <i>Eli</i> governs <i>Israel</i> , — — —	
<i>Sampson</i> kills himself, with 3000 <i>Philistines</i> , — — —	1116
The <i>Philistines</i> conquer <i>Israel</i> , and take the ark, — — —	1100
<i>Samuel</i> judges <i>Israel</i> , — — —	1094
<i>Athens</i> governed by Archons, — — —	1080
<i>Ducalion</i> king of <i>Theffaly</i> . — — —	
<i>Amosis</i> or <i>Tetbmosis</i> the 2d king of all <i>Egypt</i> , — — —	1070
<i>Saul</i> king of <i>Israel</i> , — — —	1070
<i>Saul</i> defeated by the <i>Philistines</i> , kills himself, — — —	1060
<i>Sparta</i> built. — — —	
<i>Samuel</i> dies, — — —	1060
<i>Davia</i>	

	ye. bef. Christ.
<i>David</i> made king, — —	1059
<i>David</i> conquers the Edomites, who fly into <i>Egypt</i> , — —	1048
<i>Hieram</i> king of <i>Tyre</i> furnishes <i>David</i> with timber, — —	1048
<i>Tyre</i> , <i>Aradus</i> built.	
<i>Cadmus</i> and <i>Europa</i> .	
<i>Acrifus</i> marries <i>Eyridice</i> , —	1047
The Phœnicians that fled from <i>David</i> , car- ry their arts and sciences into Greece, &c. and begin to sail on the Mediterranean,	1045
<i>Ducalion's</i> flood drowned <i>Theffaly</i> .	
<i>Ammon</i> reigns in <i>Egypt</i> , has fleets of ships in the Red Sea and Mediterranean, —	1034
The Egyptians begun to observe the stars. The lunisolar year altered, and made to con- sist of 365 days.	
<i>Ceres</i> teaches the Greeks to sow corn,	1030
<i>Perseus</i> .	
<i>Solomon</i> reigns, and marries the daughter of <i>Ammon</i> , king of <i>Egypt</i> , —	1019
<i>Solomon's</i> temple founded, —	1015
<i>Minos</i> reigns in <i>Crete</i> . His father <i>Asterius</i> (<i>Saturn</i>) flies into <i>Italy</i> .	
<i>Sesac</i> , the son of <i>Ammon</i> , invades <i>Arabia</i> <i>Felix</i> , and sets up pillars by the Red Sea,	1010
<i>Solomon's</i> temple finished, —	1009
<i>Sesac</i> reigns in <i>Egypt</i> , — —	1002
<i>Dædalus</i> invents the saw, wimble, &c. and gives a beginning to these arts in Eu- rope, — —	989
<i>Sysiphus</i> reigns in <i>Corinth</i> , —	983
<i>Solomon</i> dies, —	979
<i>Rehoboam</i> reigns in <i>Israel</i> . <i>Israel</i> divided, and ten tribes revolt.	

Sesac,

	ye. bef. Christ.
<i>Sesac</i> rifles the temple at Jerusalem, and the king's palace. Invades Syria and Persia, Jeroboam subject to him, —	974
<i>Bacchus</i> and <i>Ariadne</i> .	
<i>Sesac</i> invades India, sets up pillars on the Ganges, —	971
<i>Theseus</i> reigns at Athens, overcomes the Minotaur, —	968
<i>Licurgus</i> .	
<i>Sesac</i> conquers Thrace, kills king <i>Licurgus</i> , he had Ethiopians in his army commanded by Pan; and Lybian women commanded by Minerva, —	967
<i>Sesac</i> baffled by the Greeks and Scythians, —	965
<i>Minos</i> slain by the king of Sicily, —	964
<i>Hercules</i> born.	
<i>Helle</i> drowned in the Hellespont, —	962
<i>Abijam</i> reigns in Judea.	
<i>Sesac</i> slain by his brother <i>Japetus</i> or <i>Neptune</i> , —	956
<i>Afa</i> king of Judah reigns.	
<i>Orus</i> reigns in Egypt and routs the Lybians.	
The <i>Ethiopians</i> invade Egypt, and drown <i>Orus</i> in the Nile, —	947
<i>Menes</i> , or <i>Amenophis</i> , reigns in Ethiopia, —	946
The ship <i>Argo</i> built by the Greeks, —	939
<i>Chiron</i> makes the constellations.	
<i>Theseus</i> , king of Athens, stole <i>Helena</i> , —	938
<i>Hippocrates</i> .	
The <i>Argonautic expedition</i> to Colchis, —	937
<i>Abab</i> , king of Israel, reigns, —	925
<i>Paris</i> , king <i>Priam's</i> son of Troy, stole <i>Helena</i> , —	918
<i>Jehoshaphat</i> king of Judah reigns.	
<i>Obadiab</i> , <i>Elias</i> .	
Troy besieged by the Grecians, —	914
Troy	

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	ye. bef. Christ.
Troy taken, — — — — —	904
Dido builds Carthage. <i>Pigmalion</i> reigns at Tyre, — — — — —	883
<i>Aeneas</i> alive.	
<i>Hesiod</i> , <i>Homer</i> , — — — — —	870
<i>Meris</i> reigns in Egypt, — — — — —	860
<i>Jonah</i> .	
The <i>Heraclides</i> return into Peloponnesus,	825
<i>Cephren</i> reigns in Egypt, and built another great pyramid, — — — — —	824
<i>Hosea</i> , <i>Amos</i> , <i>Isaiab</i> , <i>Joel</i> .	
<i>Pul</i> founds the Assyrian empire,	790
<i>Asyebis</i> reigns in Egypt; which breaks into several kingdoms, — — — — —	788
<i>Ipitus</i> restores the Olympiads. And from this æra, the Olympiads are reckoned,	776
<i>Semiramis</i> flourishes, — — — — —	760
<i>Sanchoniathon</i> , <i>Micah</i> .	
<i>Pul</i> , king of Assyria, dies, — — — — —	747
<i>Tiglapilefar</i> succeeds <i>Pul</i> , and reigns at Nineve.	
<i>Nabonassar</i> reigns at Babylon, — — — — —	747
The <i>Egyptians</i> carry their Astronomy to Babylon, and found the æra of <i>Nabonassar</i> .	
<i>Abaz</i> reigns in Judea.	
<i>Damascus</i> taken by <i>Tiglapilefar</i> , king of Assyria, — — — — —	740
<i>Hezekiab</i> reigns in Judea.	
<i>Salmanassar</i> succeeds <i>Tiglapilefar</i> , — — — — —	729
<i>Habakkuk</i> .	
<i>Salmanassar</i> takes Samaria, and carries the ten tribes captive to Nineve, — — — — —	721
<i>Sennacherib</i> reigns over Assyria, — — — — —	719
<i>Syracuse</i> built by <i>Archias</i> .	
<i>Nabum</i> , <i>Tobiab</i> , or <i>Tobit</i> .	

Sennacherib

	ye. bef. Christ.
<i>Sennacherib</i> slain. The Medes revolt from the Assyrians, — —	711
<i>Confucius</i> the Chinese philosopher.	
<i>Afferbaddon</i> reigns in Assyria, he built Tar- sus and Ancliale in one day, — —	711
<i>Lycurgus</i> , — —	710
The <i>Corinthians</i> begin to build ships with three orders of oars, — —	697
<i>Tirhakab</i> reigns in Egypt, — —	687
<i>Afferbaddon</i> invades Babylon, — —	681
The <i>Jews</i> conquered by <i>Afferbaddon</i> , their king <i>Manasseh</i> carried prisoner to Babylon,	673
<i>Afferbaddon</i> invades Egypt, and subdues it,	671
<i>Afferbaddon</i> dies, — —	668
<i>Amasis</i> defeats <i>Apres</i> , and reigns in Egypt.	
<i>Saosduchinus</i> king of Assyria reigns, —	668
<i>Nebuchadnezzar</i> defeats <i>Arphaxad</i> , the Mede, — —	661
<i>Manasseh</i> returns from captivity.	
<i>Judith</i> cut off the head of <i>Holofernes</i> , <i>Nebuchadnezzar's</i> general, — —	660
The oldest sea fight between the <i>Corinthians</i> and <i>Corcyreans</i> ; in which the <i>Corcyreans</i> are worsted, — —	657
<i>Psammiticus</i> , by conquering the other eleven kings, becomes king of all Egypt,	655
The first <i>Messenian</i> war, — —	652
<i>Charops</i> the first decennial archon at Athens,	647
<i>Saosduchinus</i> dies.	
<i>Chyniladen</i> reigns in Assyria, — —	643
<i>Josiab</i> reigns in Judea, — —	640
<i>Phraortes</i> , king of the Medes, killed in the Assyrian wars, — —	636
<i>Astyages</i> king of the Medes, — —	636
<i>Jeremiah</i> , <i>Zephaniab</i> .	
<i>Cyrene</i> built by <i>Battus</i> , — —	633
Rome	

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	ye. bef. Christ.
Rome built by Romulus, (by the common account 752), — — —	627
Nabopolassar revolts from the king of Assyria, and reigns over Babylon, —	625
Psammiticus conquered by Cambises king of Persia, — — —	621
Tarentum built by Phalantus, — — —	620
Psammiticus dies, — — —	617
Nechaoh, or Pharaoh Necco, reigns in Egypt,	617
Cyaxeres reigns over the Medes, —	611
Josiah, king of Israel, slain by Nechaoh, Solon.	609
Nebuchadnezzar reigns at Babylon,	606
Nebuchadnezzar defeats Neco.	
Nineve destroyed, and the Assyrian empire, Daniel.	609
The second Messenian war,	607
Nebuchadnezzar invades Syria and Judea, under Nabopolassar his father, — —	606
Nebuchadnezzar king of Babylon, —	604
The kingdom of Macedon founded by Carannas and Perdiccas, — —	596
Zedekiah reigns in Judea.	
Thales Milesius.	
Cyaxeres makes war against the Lydians, Judith.	590
Arphaxad reigns over the Medes, —	589
Nebuchadnezzar burnt the temple of Solomon, and carried the Jews captive to Babylon, — — —	588
Messana built, — — —	588
The Assyrians beaten by the Medes, under Astyages, — — —	586
A total eclipse of the sun, predicted by Thales put an end to the war between the	

	ye. bef. Christ.
the Medes and Libians, May 28th, <i>Baruch.</i>	585
<i>Nebuchadnezzar</i> invades Egypt, and con- quers it, — — — —	566
<i>Darius</i> the Mede reigns. <i>Hagai, Zechariab.</i>	
<i>Solon</i> , archon of the Athenians, makes laws for them, — — — —	562
<i>Cyrus</i> first king of Persia, — — — —	560
<i>Nabonadius</i> king of Babylon, — — — —	555
<i>Negropolassar</i> defeated by <i>Cyrus</i> , — — — —	551
<i>Cræsus</i> king of Lydia conquered by <i>Cyrus</i> king of Persia. So ended the kingdom of the Lydians, — — — —	550
<i>Cyrus</i> takes Sardes, — — — —	544
<i>Cyrus</i> takes Babylon, — — — —	538
<i>Belsazzar</i> , the last king of the Babylonians. <i>Cyrus</i> overcomes <i>Darius</i> the Mede, and tran- slates the empire to the Persians, — — — —	536
The <i>Jews</i> return from captivity.	
<i>Cyrus</i> dies, — — — —	529
<i>Cambises</i> , king of Persia, took Memphis, Subdued the Ethiopians, — — — —	524 523
<i>Darius</i> , the son of <i>Hystaspes</i> , reigns in Persia, — — — —	521
The <i>Magi</i> are slain.	
<i>Zoroaster, Esfber, Pindar, Anacreon.</i>	
The second temple built at <i>Jerusalem</i> at the command of <i>Darius</i> , — — — —	520
<i>Tarquin</i> the last king of the Romans ex- pelled, and consuls elected, — — — —	508
<i>Anaxagoras.</i>	
The <i>Athenians</i> beat the Persians at Mara- thon, — — — —	485
<i>Xerxes</i> reigns (called also <i>Abasuerus</i>) — — — —	485
<i>Xerxes</i> defeated by the Greeks, — — — —	484
<i>Xerxes</i>	

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	ye. bef. Christ.
<i>Xerxes</i> passes over the Hellespont, fought Leonidas king of Sparta, who beat him,	480
<i>Athens</i> burnt by Mardonius, <i>Xerxes's</i> ge- neral, — — —	478
<i>Artaxerxes Longimanus</i> reigns, — — —	464
<i>Esdra</i> s.	
<i>Artaxerxes</i> kills his brother, — — —	463
<i>Ezra</i> returns into Judea, — — —	457
<i>Nebemiab</i> .	
<i>Herodotus</i> , <i>Meton</i> .	
The <i>Peloponnesian</i> war begins, — — —	431
<i>Hippocrates</i> , <i>Democritus</i> .	
<i>Darius Notus</i> reigns, — — —	424
<i>Thucydides</i> .	
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<i>Venice</i> built, —	421
<i>Valentinian</i> III. Emperor, —	425
<i>Theodoret.</i>	
<i>Augustulus</i> , the last Emperor of Rome, —	476
<i>Arthur</i> king of Britain, —	516
<i>Justinian</i> Emperor, —	527
The Christian æra begun to reckon by, —	532
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<i>Procopius.</i>	
<i>Tiberius</i> II. Emperor, —	575
<i>Mahomet's</i> flight to Medina, —	622
<i>Damascus</i> and <i>Jerusalem</i> taken by the Saracens, —	636
<i>Constantius</i> Emperor, —	699
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<i>Theodosius</i> III. Emperor, —	714
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<i>Pepin</i> king of France.	
<i>Charles</i> the great, king of France, —	767
<i>Alphonfus</i> king of Spain, who freed it from the tribute of 100 virgins, —	793
<i>Charlemain</i> Emperor of Rome, —	800
<i>Egbert</i> first sole monarch of England, —	819
<i>Ethelwolf</i> king of England, —	837
<i>Alfred</i> , king of England, founds the uni- versity of Oxford, —	874
The <i>Normans</i> settle in Normandy, —	884
<i>Eudo</i> king of France drives out the Normans, —	889
<i>Lewis</i> IV. Emperor, the pope sets up another, —	900

	ye. aft. Christ.
<i>Alexander</i> , Emperor of the East, —	911
<i>Athelston</i> king of England, —	924
<i>Otho</i> the great, Emperor of the West, —	938
<i>J. Zimisca</i> , Emperor of the East, —	969
<i>Otho</i> II. Emperor of the West, —	973
<i>Edward</i> (the martyr) king of England, —	975
The <i>Danes</i> invade England and are beaten, —	1002
<i>Henry</i> (duke of Saxony) chosen Emperor, —	1008
<i>Edmund</i> (Ironside) king of England, —	1016
<i>Guido Aretinus</i> , invents the notes of music, —	1022
<i>Herald</i> the Dane, king of England, —	1036
<i>Edward</i> (the Confessor) king of England, —	1042
<i>Harrold</i> usurps the crown of England, —	1066
<i>William</i> the conqueror king of England, —	1066
The <i>Turks</i> conquer Persia, take Jerusalem, &c. — — —	1070
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<i>Jerusalem</i> regained from the <i>Turks</i> , —	1099
<i>Henry</i> V. Emperor of Germany, —	1106
<i>J. Comnenus</i> , Emperor of Greece, —	1118
<i>E. Comnenus</i> , Emperor at Constantinople, —	1143
<i>Henry</i> II. king of England, — —	1154
<i>Saladine</i> , sultan of the <i>Turks</i> , —	1170
<i>London</i> bridge built of stone, — —	1187
<i>Jerusalem</i> retaken by the <i>Turks</i> , —	1187
<i>Richard</i> I. king of England, —	1189
<i>Henry</i> VI. Emperor of Germany, —	1190
<i>Baronius</i> . —	
<i>John</i> , king of England, and granted Magna Charta, — — —	1199
<i>Henry</i> III. king of England, — —	1216
The inquisition first erected against the <i>Albagenes</i> , — — —	1222
<i>Frederic</i> , Emperor of Germany, recovers Jerusalem, — —	1229
<i>Henry</i> III. confirms Magna Charta, —	1253
<i>Richard</i>	

	ye. aft. Christ.
<i>Richard</i> (brother to king Henry) Emperor,	1256
The <i>Barons</i> take king Henry prisoner, for breaking Magna Charta, — —	1258
<i>M. Paleologus</i> regains Constantinople,	1260
<i>Ottoman</i> the founder of the present Turkish Empire, — —	1297
The <i>Mariner's</i> compass found out,	1302
The opposers of the Romish superstition burnt at <i>Austria</i> , — —	1315
<i>Edward</i> III. king of England, beat the French, and took the French king pri- soner, — —	1327
<i>A. Peleologus</i> III. Emperor at Constantinople,	1326
Gunpowder invented in <i>Germany</i> ,	1344
<i>Charles</i> IV. (K. Bohemia) Emperor of Ger- many, — —	1347
The <i>Turks</i> take Adrianople, —	1359
<i>Richard</i> II. king of England, —	1377
<i>Tamerlane</i> the Tartar reigns, — —	1387
<i>Bajazet</i> the Turk reigns, — —	1388
<i>Tamerlane</i> defeats Bajazet, conquers Babylon, Persia, China, India, —	1399
The great <i>Mogul</i> descended from him.	
<i>Richard</i> II. deposed, — —	1399
<i>Henry</i> IV. king of England, the first of the line of Lancaster, — —	1399
Civil wars in <i>Germany</i> , — —	1404
<i>Sigismond</i> (king of Hungary) Emperor,	1410
<i>Henry</i> V. king of England, — —	1413
— Beats the French at the battle of A- gincourt, — —	1415
<i>Henry</i> VI. king of England, —	1422
<i>J. Huniades</i> , Emperor of Constantinople,	1442
The Art of Printing invented, —	1449
<i>Mahomet</i> II. sultan of the Turks, takes Con- stantinople, — —	1453
The	

	ye. aft. Christ.
The <i>Turks</i> conquer <i>Peloponnesus</i> or <i>Morea</i> ,	1439
<i>Henry VI.</i> deposed, and <i>Edward IV.</i> made king, — — — —	1460
<i>Edward V.</i> king of England, —	1483
<i>Richard III.</i> king of England, —	1483
<i>Henry VII.</i> king of England, —	1485
<i>C. Columbus</i> (a Genoese) discovered America,	1493
<i>Americus Vespasius</i> discovers South America,	1497
<i>Henry VIII.</i> king of England, —	1509
<i>M. Luther</i> begins the Reformation,	1517
<i>Boetius, Erasmus, Copernicus.</i>	
<i>Solyman</i> Emperor of the Turks, —	1520
<i>Belgrade</i> taken by the Turks, — —	1521
The Streights of <i>Magellan</i> discovered by <i>F.</i> <i>Magellan</i> , — — —	1521
The Council of <i>Trent</i> , — — —	1540
<i>Edward VI.</i> king of England, —	1547
<i>Mary</i> , queen of England, restores Popery,	1553
<i>Elisabeth</i> , queen of England, restores the Reformation, — — —	1558
<i>Charles IX.</i> king of France, — — —	1560
The Massacre of the Protestants at <i>Paris</i> ,	1572
<i>Mercator.</i>	
The <i>Venetians</i> defeat the Turks at sea,	1572
<i>Henry III.</i> king of France, —	1574
<i>Rodulphus II.</i> Emperor, — — —	1576
The holy League in <i>France</i> , — — —	1576
<i>Holland</i> revolts from Spain, —	1579
Sir <i>Francis Drake</i> sails round the Globe,	1580
<i>Tycho Brabe, Scaliger.</i>	
Pope <i>Gregory XIII.</i> corrects the Calendar,	1582
<i>Mary</i> queen of Scots beheaded, —	1587
The <i>Spanish Armado</i> destroyed by the English	1588
<i>Henry III.</i> of France, stabbed by Clement, a friar, — — —	1589
<i>Pbilib III.</i> king of Spain, — — —	1598
<i>Vieta</i>	

	ye. aft. Christ.
<i>Vieta.</i>	
James I. king of England, —	1603
Gunpowder Plot, —	1605
Henry IV. of France stabb'd by Ravillac, —	1610
Lewis XIII. king of France, —	1610
Gustavus Adolphus, king of Sweden, —	1611
The New River brought to London, —	1614
Frederic II. Emperor, —	1619
<i>Des Cartes.</i>	
Philip IV. king of Spain, —	1621
Charles I. king of England, —	1625
G. Adolphus slain in battle, —	1632
Ferdinand III. Emperor, —	1637
Portugal revolts from Spain, —	1640
Lewis XIV. king of France, —	1643
King Charles I. beheaded, —	1649
Oliver Cromwell died, —	1658
King Charles II. restored, —	1660
The great Plague at London, —	1665
London burnt down, —	1666
<i>Ricciolus.</i>	
Peace concluded with the Dutch, —	1674
St. Paul's church begun to rebuild, —	1675
The Czar of Muscovy dies, and his sons rule jointly, —	1682
The Emperor at war with the Turks, —	1682
The Turks defeated before Vienna, —	1683
The great Frost, —	1684
King Charles II. died, and is succeeded by James II. —	1685
James II. deposed, —	1688
William and Mary king and queen of England, —	1689
The battle of Boyne in Ireland, —	1690
An Earthquake in England, —	1692
Queen Mary died, —	1694

Queen

	ye. aft. Christ.
Queen <i>Anne</i> came in, — —	1702
Battle of <i>Blenheim</i> , — —	1704
Battle of <i>Ramallies</i> , — —	1706
<i>England</i> and <i>Scotland</i> united, — —	1707
St. <i>Paul's</i> church finished, — —	1708
Queen <i>Anne</i> died, — —	1714
George I. king, — —	1714
A total eclipse of the sun at London, April 22d, — —	1715
Rebellion at <i>Preston</i> , — —	1715
The <i>Aurora Borealis</i> first observed, — —	1716
The <i>Spanish</i> fleet destroyed near <i>Sicily</i> , — —	1718
Sir <i>I. Newton</i> died, — —	1727
George II. king, — —	1727
A great Frost 1739, and — —	1740
Battle of <i>Dettingen</i> , — —	1743
A bright Comet, in the spring, — —	1744
Rebellion at <i>Culloden</i> , — —	1746
Correction of the Calendar in <i>England</i> , — —	1752
George III. king, — —	1760
Peace with <i>France</i> and <i>Spain</i> , — —	1763

F I N I S.



